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ABSTRACT

Illustrated with reproductions of Mayan art and architecture, this activity book contains readings and activities about the Maya, including bilingual lesson sheets. The materials link middle school classroom studies of Mayan culture with history, social studies, and community resources. Eight lesson units explore the central aspects of Mayan art. The introductory unit, deals with the basic elements of Mayan culture, including historic context, environment, numerical system, astronomy, and cosmology. The second unit presents the most common subjects in Mayan art: Lord Pacal, the military, aesthetic experiences from art of deformed figures, women, stylized animals, jaguars, bats, snakes, characteristics of deities, the principal bird deity, and thrones. The third unit of lessons looks at central themes in Mayan art which include storytelling, accession, the tablets of Palenque, ballcourts, ball players, and ball player themes of vase paintings. Unit four presents the different media used in Mayan art: corbelling, clay, and jadeite. The 18 lessons in unit 5 cover architecture, Mayan revival architecture, Frank Lloyd Wright, outdoor sculpture, stelae, boulder monuments, footwear, directions at Quirigua, governor relief, communications about glyphs, lintels and flat stone reliefs, wood reliefs, painting, classic Maya pottery, drawing, and cartoons. Unit 6 deals with the different functions of art objects: pottery, recipes, drinking vessels, ocarinas, whistles, rattles, incense burner, backstrap weaving, costumes, and headdresses. The seventh unit explores Maya notions of aesthetics and symmetry. Unit 8 looks at Mayan artistic style and artists. The book concludes with a 74-item bibliography of instructional resources and an index. (FB)

ED 405 247

MAYA ART

Classroom and Museum

ACTIVITY BOOK

Ann H. Fuerst, Ph.D.

SO 026 298

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Cover

The composition on the cover is a detail of a painting on the Buenavista Vase. The two figures depicted in a linear style and wearing elaborate clothing are some of the finest examples of Maya artistry. The painter has shown an understanding of human proportions and balanced the smooth, long, plain curves of the dancers' bodies with short, changing rhythmic patterns of the costumes. His wonderful imaginative images are startling in the way they seem to defy gravity. Notice how the exotic monsters behind each dancer—facing the next figure—are not on pedestals that touch the ground, but on pedestals that are attached to the dancers' backs: elaborate backdresses. The dancers, with their outstretched arms, symmetrically balance the profiles: the arms of the dancers reach, yet balance the reach of the exotic monsters.

In painting the orange outlines on a cream-colored background, the artist has demonstrated remarkable control of the paint. He had exquisite control of line and color. The lines are almost all the same thickness and the negative space between the glyphs and the figures appears to be carefully calculated so the viewer will have trouble telling where the "beginning" is. Done in the painting style that resembles the accomplishments of artists whose work was first excavated in 1911 at the archaeological site of Holmul in the vicinity of Naranjo, Guatemala, the vase really has mystified scholars. It was found in a burial at the site of Buenavista del Cayo, Belize (15 kilometers east of Naranjo), by archaeologists Joseph Ball and Jennifer Taschek of San Diego State University. This vase is one of the most beautifully painted of the Holmul-style pots.

According to the inscription in glyphs on the rim, it was painted for Lord *K'ak'-Til*, ruler of Naranjo. He was ruler from A.D. 693-719. However, the vase was not found in the ruler's tomb, but in the tomb of a young elite adolescent male. It is believed the ruler of Naranjo used this vase as a royal gift during an important social and political event. It is possible the vase was given as a funerary gift to the ruler of Buenavista on the occasion of his son's burial because Lord *K'ak'-Til* wanted to bring the area of Buenavista under his control. However, scholars think it is more likely the vase was a regal gift "signifying social and political ties" between the two rulers of Naranjo and Buenavista.[1] One scholar speculates that the Buenavista Vase was made to order. That is, the artist knew it was going to Buenavista. He departed from his own tradition of color and pose, and turned the dancer to the right in the same style as the Buenavista artists.[2]

The artist had a very individualistic way of painting the glyphs on the rim. In the Holmul style, most of the vases were painted with the theme of dancers. The Holmul dancer theme shows multiple representations of single male figures dancing out of the underworld at the moment of apotheosis. Unlike most vases in the Holmul style, where the scenes of dancers usually face to the left, the Buenavista Vase has figures that face to the right. No vertical texts or dwarves are present in the Buenavista Vase as in the other cylinder vases in the Holmul style in this book (see pages 204, 205, and 235). The glyphs at the top of the Buenavista Vase have been translated and represent a specific version of the Primary Standard Sequence (see page 188 for glyphs).

Before this vase could be put on exhibit, it had to be restored. The broken vase was patiently assembled by Barbara Kerr. It took her almost a year of painstaking work to put all the pieces together. She used a white glue for the adhesive (like Elmer's) that is reversible.

The painting on the cover is reproduced almost half of its original size. We are fortunate to have such fine examples of ancient art to look at and enjoy today.

The Buenavista Vase. Buenavista del Cayo, Belize. Early 8th century A.D. Classic Maya. H: 29.7 cm. x Diam: 12.3 cm. Department of Archaeology, Belize. © 1993 roll-out photograph by Justin Kerr, courtesy Department of Archaeology, Belize.

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[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, 1994. p. 305.
[2] Justin Kerr in personal communication, July 25, 1994.

Editor
Ann H. Fuerst, Ph.D.

• San Diego Museum of Man •

MAYA ART

Classroom and Museum

ACTIVITY BOOK

• San Diego Unified School District •

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The *Maya Art Activity Book* was published by the San Diego Museum of Man and the San Diego Unified School District, San Diego, California. It was edited by Ann H. Fuerst, Ph.D., with significant contributions by Susan Bernstein, Education Coordinator, San Diego Museum of Man.

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Ordering Information

Copies of the *Maya Art Activity Book* are available for $27.50 each, plus $3.50 for mailing and handling, and $1.93 sales tax for California residents from the Museum Shop, San Diego Museum of Man, 1350 El Prado, San Diego, California, 92101. Telephone 619-239-2001. FAX 619-239-2749.

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Museum Director

The culture of the ancient Maya has played an important role in the exhibits and educational programs of the Museum of Man since its inauguration in 1915. One of the aims of our first director, Dr. Edgar L. Hewett, was to educate the American public about the exciting archaeological discoveries that had been coming to light in the Maya heartland since the late 19th century. Part of his effort involved the commissioning of replicas of stone monuments from Quiriguá which still grace the rotunda of the Museum.

The Maya Art Activity Book is yet another step in this ongoing journey of discovery. It brings together, along with the Museum of Man holdings, a selection of drawings and photographs of some of the most outstanding examples of Maya art found in museums across the country. These reproductions are from the research of leading Mayanist scholars assembled for the first time in a format that can be used by teachers.

In California, current state frameworks and adopted textbooks encourage integration of many aspects of Maya civilization into school curricula. The Maya Art Activity Book seeks to respond to this innovation. Using the photographs and worksheets, educators can introduce students to the fascinating world of this major pre-Columbian civilization. In addition, bi-lingual students will have worksheets in Spanish to aid them in their studies. We hope that this book will help both teachers and students gain a deeper appreciation for the ancient Maya.

Sincerely,

Douglas Sharon

Douglas Sharon, Ph.D.
Director
San Diego Museum of Man

Superintendent, San Diego City Schools

San Diego City schools is proud to cooperate with the San Diego Museum of Man in bringing these instruction materials to students. Readings and activities about the Maya, and lessons in Spanish, as well as in English, send a culturally affirming message to all our students and members of our Latin American community that the language, art forms, and origins of this ancient Central American civilization are valued and respected in the school environment. Because this book is based on several curriculum frameworks, it fits well with our instructional programs.

What we do is help our students develop critical thinking skills. As their studies with a variety of lessons in this book include analytical commentaries and challenge students to investigate artistic skills known to the Maya, our young people will solve problems and draw conclusions. When they study and visit the Maya collection at the San Diego Museum of Man and see what visual images the Maya used to portray their idea of themselves as a people, they will start a life-long educational process in mastering this culture.

I encourage educators to visit community resources like the San Diego Museum of Man to learn first hand how they can help our young people locate the Classic Maya culture in time and place. San Diego City Schools is pleased to have artifacts from such an important period of history available for our young people to study in a fine local collection.

My congratulations to those who contributed to this project.

Sincerely,

Bertha O. Pendleton

Bertha O. Pendleton, Ed.D.
Superintendent, San Diego City Schools

Editorial

This book is packed with beautiful photos and drawings of Maya art and architecture. Some of the objects were made by royal artists, the finest the Maya civilization produced. Some are very simple, in ruins, or even crude in their appearance. One of the questions this book hopes to answer is "Why should students study Maya art?"

Why should students study art...even art of the Maya?

Students should study art because it can increase their capacities to enjoy life. The activities in this book are designed primarily to give students experiences in the visual arts. The materials are also developed to link middle school classroom studies of Maya art with History-Social Science and with community resources in institutions across the nation. Here are some other reasons for studying the things presented in this book:

- To increase interest in creativity and its development
- To develop the sensibilities needed to appreciate complex and subtle works of art
- To help students have an aesthetic experience and delight in Maya art even without placing the art in an economical, political, social, or historical context[1]
- To learn how to participate in the wonderful works that are found in all cultures throughout the globe
- To learn how the Maya have created works that have the capacity to capture our imagination and to satisfy our sensibilities
- To refine these sensibilities and to cultivate the imagination
- To help students gain meaningful access to what peoples of all cultures have created[2]
- To provide classroom teachers with instructional materials containing illustrations, photographs, information, and worksheets to increase student awareness of ancient art forms and accomplishments of our Latin American neighbors.

Another reason to study the Maya at this time is the increased knowledge scholars have about reading the ancient pictographic writing, and the continued excitement created over archeological discoveries and their aesthetic qualities.[3] When participating in the activities in this book, students will learn they can happily study the accomplishments of the Maya in many ways and through many means including modern technology. My heart-felt thanks to all who participated in this project, especially my friend Susan, my husband Chuck, and my daughter Sheryl.

Ann H. Fuerst

Ann H. Fuerst, Ph.D.
Editor

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[1] Elliot W. Eisner. "Revisionism in Art Education: Some Comments on the Preceding Articles." *Studies in Art Education*. 1994, 35 (3), p. 189.
[2] Elliot W. Eisner. "Revisionism in Art Education: Some Comments on the Preceding Articles." *Studies in Art Education*. 1994, 35 (3), p. 191.
[3] Gene S. Stuart and George E. Stuart. *Lost Kingdoms of the Maya*. Washington, D.C.: National Geographic Society. 1993.

Introduction 1

Setting the Stage in School. When the archaeologists and their guide meet the gods, a strange and wonderous event takes place. In the foreground the sun god (Nina Robinson, 6th grade) rests on the most powerful beast of the jungle, a jaguar. From left to right in the background a feathered serpent god (Lino Oliveria, 6th grade), an archaeologist (Jennifer Heine, 6th grade), a guide (Fifth grade teacher Steve Kennedy), an archaeologist (Sean Badgett, 6th grade), and the rain god (Jose Perez, 6th grade) appear. © 1994 photograph by Ion Moe, courtesy *Star News*, Chula Vista, California.

Getting Started: Using this Activity Book

There are more instructional materials included in this book than you can possibly use. Select the ones that best fit your objectives and the needs of your students or museum. Many activities were written to serve more than one discipline. More than a dozen activities have been translated into Spanish. Sometimes the pages are bilingual with the English first, then the Spanish. The languages are usually separated by a symbol "•" placed next to the Spanish.

This illustrated book was assembled to make it easier for everyone to visualize the scope of the Maya artisan's creativity. All photographs and drawings in this book are from the Maya culture unless otherwise noted. The reproductions of the stone monuments are especially valuable because they allow people to grasp the images easily. Erosion of monuments and the absence of the original paint applied there years ago sometimes make it difficult to discern foreground and background. When planning your Maya studies, you may want to take one or more activities from each chapter instead of all your activities from one area: subject matter, theme, product, media, function, design, and style. This will help students develop an understanding of the kinds of challenges artists face when making an art product.

The activity pages and photographs may be removed from the book and placed in three-hole punched plastic sleeves for protection. Later, these can be passed around to students for closer examination.

Pronunciation guidelines for Maya words vary depending on the source. Generally speaking, vowels in Maya place names usually take the sounds ah, ay, ee, oh, and oo, while x corresponds to English "sh." Words are generally accented on the final syllable: Uxmal = oosh MAHL and Yaxchilán = yahsh chee LAHN.[1]

Your journey will be an exciting one as you help students locate the Classic Maya culture in time—advancing across the years A.D. 700-1000—traveling from place to place.

Preparing for a visit to the Museum

To make the most of a visit to a museum, be prepared in advance. The first thing on a list of preparations should be the development of an objective for the trip. You might have one or several in mind already. Often, the purpose develops only after your pre-visit. Make contact with the education department or docents of your chosen museum and ask for information on educational programs, loan library materials, and booking a visit. Besides your school's field trip arrangements, some museums may ask for reservations at least six weeks in advance of your visit. The phone numbers for museums in the United States represented by photography in this book are given on the next page.

[1] "The Maya," *National Geographic*, Vol. 148, No. 6 December 1975. p. 737.

Arranging for Tours

Albany Museum of Art
(912) 439-8400
311 Meadowlark Drive
Albany, Georgia 31707

Art Institute of Chicago
(312) 443-3600
111 South Michigan Ave.
Chicago, Illinois 60603-6110

Bowers Museum of Cultural Art
Docent Tour Coordinator
(714) 567-3680
2002 North Main Street
Santa Ana, California 92706

Center for the Study of Books in Spanish for Children and Adolescents
Call to set up a tour to visit the nation's only center of this type with over 7,000 titles.
(619) 752-4070
California State University, San Marcos
Craven Hall, 4th Floor, #4206
So. 333 Twin Oaks Valley Rd.
San Marcos, California 92096-0001

Dumbarton Oaks
(202) 342-3265
1703 32nd Street, N.W.
Washington, D.C. 20007

Fresno Art Museum
(209) 441-4221
Contact Diadre Metzler
(60 students with 2 weeks notice)
2233 N. First Street
Fresno, California 93703

Hollyhock House
Tour Reservations (213) 485-4581
Barnsdall Art Park
4808 Hollywood Boulevard
Los Angeles, CA 90027
(Student tours are free Tuesday through Friday at 10:00 and 11:00. Schedule at least one month in advance. Only 30 students per tour).

Los Angeles County Museum of Art
Docent Council Office (213) 857-6108
(weekdays 9 A.M.-4:30 P.M.)
5905 Wilshire Boulevard
Los Angeles, California 90036

M. H. de Young Memorial Museum
(415) 750-7692
Golden Gate Park
San Francisco, California 94118

Metropolitan Museum of Art
1000 Fifth Avenue
New York, New York 10028-0198

Mexican Museum
(415) 441-0445
Fort Mason, Bld D
Laguna & Marina Blvd.
San Francisco, California 94123

Museum of Fine Arts, Boston
Elementary and Secondary
(Maximum of 60)
(617) 267-9300 Ext. 310
College Tours
(617) 267-9300 Ext. 368
465 Huntington Avenue
Boston, Massachusetts 02115

Peabody Museum of Archaeology and Ethnology
(617) 495-2248
Harvard University
11 Divinity Avenue
Cambridge, Massachusetts 02138

Phoebe A. Hearst Museum
of Anthropology (UCB)
(510) 642-3681
103 Kroeber Hall
Berkeley, California 94720

St. Louis Art Museum
(314) 721-0072
(Tour requests in writing only. Allow three weeks.)
1 Fine Arts Drive
St. Louis, Missouri 63110-1380

San Diego Museum of Man
(619) 239-2001
(6 weeks notice, tours and outreaches)
1350 El Prado
Balboa Park
San Diego, California 92101

Southwest Museum
(213) 221-2164
P.O. Box 41558
Los Angeles, California 90041-0558

Worcester Art Museum
(508) 799-4406
Fifty-five Salisbury Street
Worcester, Massachusetts 01609-3196

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State of California Framework Goals

The California State Board of Education, as well as many other boards of education, have established goals for studying subjects in the schools. These goals are reviewed and published in state documents called frameworks. Two of these frameworks are especially addressed in this book: *Visual and Performing Arts Framework* and *History-Social Science*. The topics of other state frameworks are also introduced. Here are some of the goals of the frameworks which could be applied for studying the Maya.

Visual and Performing Arts Framework

The reasons cited in the *Visual and Performing Arts Framework* for studying the arts are readdressed to include specifically the art of the Classic Culture. Activities linked with the performing arts (i.e., making and playing an ocarina or putting on a drama production like Journey to the Sun) are also presented in these instructional materials so that teachers may help students:

- develop a base for making informed aesthetic judgments about the Maya;
- acquire knowledge of historical and cultural developments which occurred in pre-Columbian times and in the twentieth century (Maya Revival) as a result of varying needs and aesthetic points of view;
- develop and expand visual arts knowledge and skills to express their personal ideas about the Maya imaginatively including technology; and
- develop and expand their aesthetic perception.[1]

History-Social Science

The History-Social Science Framework points out that 7th graders should study the accomplishments of the Maya "for their noble architecture" and pictographic writing, among other things.[2] To implement these goals the State Department of Education has also published (1994) a *Course Model for History-Social Science, Grade 7* and the curriculum commission has adopted in the state of California the 7th grade Houghton-Mifflin history-social studies text *Across the Centuries.*[3]

Teachers will find in this book many things to assist them in furthering the development of the following topics and many others listed in the framework:
Developing Time Lines • Geography • Maize Agriculture • Classic Age • Architecture • Calendar • Pictographic Writing.

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[1] *Visual and Performing ArtsFramework for California Public Schools Kindergarten Through Grade Twelve*. Sacramento, California: California State Department of Education, 1989. pp. 91-118.
[2] *History-Social Science Framework for California Public Schools Kindergarten Through Grade Twelve*. Sacramento, California: California State Department of Education, 1988. p. 64.
[3] See resource section in this book under Guides for teachers for ordering information.

Name_____Date_____

Name of Museum_____

My First Visit to See The Art of The Maya

(Select two of the topics below, identify the art works you have chosen, and take as many notes as you can to help you with writing your answer when you are back in the classroom.)

1. Locate a fragment of a Maya Art form. Describe what relation this fragment had to the whole object and state your reasons. _____

_____

_____

2. Identify two Maya pieces that have the same subject matter but different styles or techniques. Compare the similarities and differences between them.

_____

_____

3. What color is most represented in this exhibit? Give examples and explain what you think are the reasons._____

_____

_____

4. Find a figure in one of the art works by the Maya that reminds you of yourself. Identify the art work and explain why.

_____

_____

5. What do people do who are represented in the art works you have selected? Give details when you explain your answer.

_____

_____

6. Point out three different artistic techniques used in this exhibit. Describe the function or the product that seems to be suited to each of the techniques and explain your reasons.

_____

_____

7. Which event given on one or more of the Maya art objects causes the most physical anguish? Mental anguish? What suggests it?

_____

_____

an estimation of the average size of most of the humans represented in this exhibit. Explain why humans were represented in the sizes that you found. (Size estimates should be based upon human stature when standing straight).

_____

_____

9. Pick the art work you had the strongest reaction to and rename it. Describe your reaction and explain how you think the artist made an impression on you with the elements and principles of art.

_____

_____

10. After observing all the Maya art objects in this exhibit, what do you think the personal characteristics of the Maya artist are? Explain your answer by describing certain things you found in the art objects.

_____

_____

11. Find Maya art works that have or do not have background elements. Identify which art object has a background and describe the background (For example, there may be people, a throne, an imaginary creature, all in the background of the main subject.) Tell why the artist used or did not use a background.

_____

_____

12. What type of geometric or abstract designs do you find repeated throughout the exhibit? Give examples and cite the numbers of time they appear. Be prepared to make a graph to show the data you've collected on each shape or pattern.

_____

_____

Notes on Selected Art Objects:

Journey to the Sun: A Tale of Three Cities

Karl H. Kellogg Visual and Performing Arts Magnet is an elementary school in Chula Vista, California. Each year the school site artistic team chooses a culture or historical period and approaches the new theme with many kinds of involvement. The components of the year-long study include a thematically connected curriculum, a theatrical performance written by Marlene Marmanillo and Artistic Director Bonnie Johnston, authentic props, costumes and sets, a student-produced art museum, and a study guide called *The Imagination Map*. In 1993-94, the theme was *Journey to the Sun: A Tale of Three Cities*.

At Kellogg they have found that this thematic approach to education offers many new opportunities for faculty and students to learn about the connection between art and history, to share what they have learned with others through performance, and most importantly to build self esteem. Discipline problems are few as most students look forward to coming to school and are excited about what comes next! School administrators, teachers, artists, parents, and students work together implementing parts of the project as a team. Financial support comes from the California state educational magnet school funds, grants, and a parent support group formed to assist in raising money.

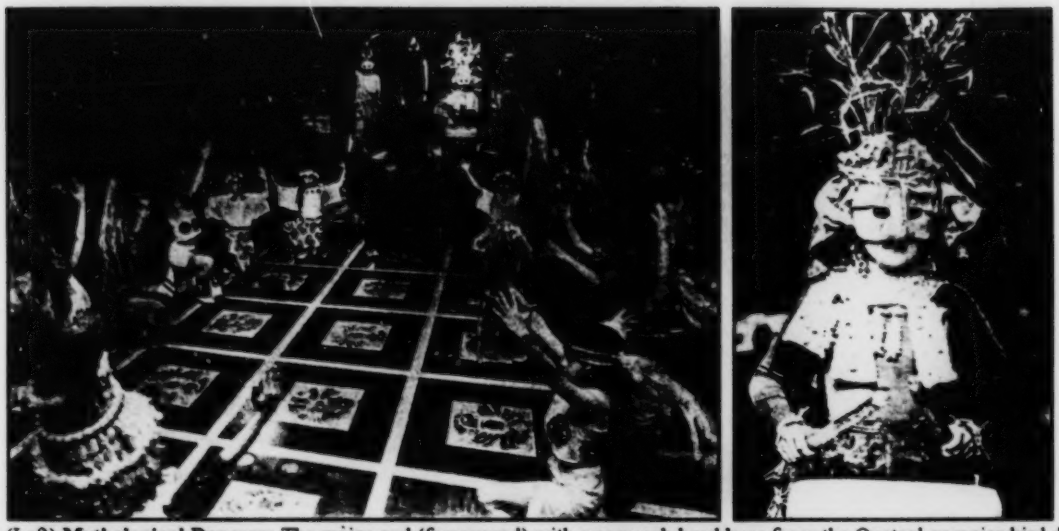
Volunteer help from parents includes transporting students and sewing costumes. Their wonderful support adds to the success of these projects. Bonnie Johnston and her talented staff have become partners in education with the Old Globe Theatre, the San Diego Museum of Man, and San Diego Museum of Art. Together these nationally known institutions lend their expertise in the research of thematic choices, teacher-training, and in-kind services.

Thematic curriculum development: As the theme for the school year is developed by the arts team, teachers in all the grades find ways to integrate the theme into all their studies, i.e., science, art, history-social science, mathematics, health and physical education, and all the language arts. Lesson plans are developed, workshops are given, and professional resources from the community are brought in to enhance the learning experience for both teachers and students.

> *"The experience of working with students to make colorful history of the Maya come to life is truly a rewarding one. I am in constant amazement at the willingness of the children to put so much time and energy into creating an episode of history with such great historical accuracy and detail. Every cast member approached his or her part with a high degree of seriousness and professionalism which was reflected in the overall quality of the production. It was indeed a rewarding and enriching learning experience for us all."*[1]
>
> Steve Kennedy, actor and teacher
> Karl H. Kellogg School

Theatrical Performance: The 18-21 performances took place in a cafeteria transformed under the direction of designer Greg Stevens into an ancient ruin, a site for an archaeological excavation. For the Maya myth—the only one discussed here—the center stage was a Maya ball-court with applied paint on clear contact paper stencils. The ballrings were actually in the audience. The ceiling was draped with fireproofed gauze, dipped in green, and shredded to look

[1] Steve Kennedy, Personal Communication 9/5/94



(Left) **Mythological Dancers:** The maize god (foreground) with a corn-cob headdress faces the Quetzal or major bird deity in this dance. Note the stenciled costumes and floor tile. (Right) **Masked drummer.** Leona Larsen in costume. Both © 1994 photographs by Ion Moe, courtesy *Star News*, Chula Vista, California.

like moss. Large sculptures were placed around the room. Sitting around the location of the dig, the audience watched two archaeologists (Jennifer Heine and Sean Badgett) on a tour of the area with their Mexican Guide (Steve Kennedy, 5th Grade teacher). When a clay whistle is discovered in the ruins, the Maya story begins—the first of the three myths—of how music came to earth.

The show lasted about 45 minutes. When it was over, there was a question and answer period. Aproximately fifteen performances were given, three a day with one on Thursday. Original music was written for this event. Prior to entering the theater, visiting students toured the colorful sculpture garden of stelae and sculpture reproductions and the "Maya Museum" in the library. School children came from within the district and county, and even outside the country—Tijuana, Mexico—to see the shows.

The Costumes: A parent, Mrs. Darlene Heine, became the Production Coordinator of Costumes, and along with wardrobe design, worked on tickets, scheduling, and purchasing. Costumes were made of cotton muslin stenciled with latex paint. The stencils were Maya designs from a book, enlarged on a copier and painted on the muslin with brushes and sponges. Stripes were applied to the fabric between pieces of masking tape (i.e., the tape served as the stencil) with brush and sponges.

Headresses: Wigs and headresses gave the students a special pre-Columbian look. Mask deisgner Sue Dye created the molds for the plaster-of-Paris "strip" headresses from anything head-shaped, i.e., Jello molds and helmets. Decorations, such as feathers, painted Styrofoam forms, and even corn cobs were applied.

The Museum: Art teacher Elaine Thompson worked with students in developing projects to put on display in the museum. These included engraved greenware, clay tiles, murals, painted rocks, Maya style books and codices assembled with folds, and monumental stelae, and statues.

(Top left) **Stela**. One of 15 student-made sculptures. (Top right) **Waiting for Show Time.** The students pictured here are dressed for one of the three myths "How Music Came to the Earth" in their costumes, wigs, and headdresses. (Bottom left and right) **Student Art of the Maya**. Jennifer Heine decorated two ceramic pieces and a clay tile for the school's Maya Art Museum. She engraved geometric designs, jaguar and deer heads on cast greenware, and then, painted the pieces with red or black to set-off her incised lines. The excess color was wiped away. Photograph by Ann Fuerst.

The Sculpture Plaza: An empty space between two buildings was made into a plaza with 15 larger than life-size sculptures. The basic armatures of plywood and chicken wire were created, covered with papier mache, and set with a latex paint base coat. Greg Stevens, Scenic Designer and Visual Arts Coordinator, sketched in the essential features and students finished the rest, including rectangular-sponge prints for the mosaic look.

The Imagination Map: The Imagination Map is an exciting study guide and given to the Kellogg teachers and other instructors whose classes come to view the performances.

Maya Maps of Sculpture, Pottery, and Architecture

Choose one or more of the map making ideas below and have students create a map to illustrate geographic understanding of the land of the Maya. Have students place all site names correctly. They can add volcanoes and other natural features and man-made borders. Have students illustrate their maps with drawings of Maya art works. A number of sites are marked on the reference map. The locations on the map are approximate so you may want students to use a more detailed map for this assignment. (*See resources below.*)

• **Architectural Site Map:** Correctly place these sites: Chichén Itzá, Palenque, Uxmal, Tikal, Piedras Negras, Copán, and Quiriguá.

• **Sculptural Site Map:** Jaina, Yaxchilán, Palenque, Quiriguá, Usumacinta River, Tikal, Chichén Itzá, and Copán.

• **Painting and Pottery Location Site Map:** Lake Petén-Itzá, Sta. Rosa Xtampak, Ulúa Valley, Holmul, Bonampak, Buenavista, Naranjo, Motul de San Jose, Jaina.

• **Style Location Site Map:** Holmul, Motul de San Jose (*Ik'* style) and Lake Petén-Itzá, Chama, Altun Ha, Naranjo Area, Ulúa Valley.

• **Art Maps with Overlays:** Have students make a series of maps with overlays that represent different aspects of the Maya Art world.

• **Time Maps with Overlays:** Have students make a series of maps with overlays that represent different times when things were made in the Classic period.

• **Computer Generated Maps:** Have students design or electronically cut and paste things to demonstrate the Maya Art world. Use a scanner to import images of Maya art objects.

Resources: At seven cents each, you can get small take-home art maps of Mesoamerica ($5^1/_2$" x 8") in black-and-white with most sites identified. Order **N 277** from University Prints, Box 485, Winchester, MA 01890. National Geographic has published an excellent map on the Maya and their geographic environment. Call National Geographic Society, 1-800-638-2728 and order the October 1989 issue with the map suppliment *Land of the Maya* in it for $2.65. The colorful map will fill a bulletin board! Costs include shipping.

Map Making Assessment: Provide students with drawing paper and coloring implements. Ask students to draw free-hand, from memory, a map of the Maya area. Tell students to include the special topics they studied, as well as rivers, boundaries, and cities.

Chichén Itzá
Uxmal
Jaina
Sta. Rosa Xtampak
Altun Ha
R. Usumacinta
Nakbé
Holmul
Tikal
Palenque
Piedras Negras
Naranjo
Motul de San José
Buenavista
Yaxchilán
Lake Petén-Itzá
Bonampak
Dos Pilas
Reference Map
Chama
R. Motagua
Quirigua
R. Ulua
Copán

Name:_____

Map Title:_____

_____

21

Awareness of Place/ Concientización de la localización

Information for the teacher: The following activity is given to you in English and Spanish. Cut the sections apart and distribute after dividing the class into groups. Have students research, study, and answer the following questions in their groups. Have them change places with other group members and share their information.

✂.....

Earth's Continents: Where did the Maya live? Describe the unique qualities and diversity of their environment

✂.....

Los continentes de la tierra: ¿Dónde vivieron los maya? Describa la diversidad de su ambiente y sus condiciones singulares.

✂.....

Cities: Identify the cities associated with the art of the Maya. Make a timeline showing when the Maya artists and architects lived in which city. Match the art forms associated with the cities. Are there examples of art associated with more than one city?

✂.....

Ciudades: Identifique las ciudades relacionadas con el arte maya. Trace una línea de tiempo donde aparezcan las épocas en las que los artistas y arquitectos vivieron y en que ciudades lo hicieron. Relacione las formas artísticas que caracterizan a las ciudades. ¿Hay casos en las cuales un tipo de arte se asocia con más de una ciudad?

✂.....

Countries: Identify the countries associated with the art of the Maya. Study the boundary changes of the countries inhabited by the Maya since 1900. Make a timeline showing when the Classic Maya artists and architects lived in which area. Match the art forms associated with the regions.

✂.....

Paises: Identifique los paises que se asocian con el arte maya. Examine los cambios que han ocurrido desde 1900, en las fronteras de los paises que habitan los mayas. Trace una línea de tiempo donde aparezcan las épocas en las que los artistas y arquitectos del período clásico vivieron y en que regiones lo hicieron. Relacione las formas artísticas que caracterizan a cada zona.

Beliefs of the Maya: Identify the beliefs associated with the art of the ancient Maya. Describe how the Maya made these beliefs visible in their painting, architecture, and sculpture. Compare their favorite symbols of long ago with the symbols used in other cultural belief systems. Make a timeline showing when the Maya beliefs changed. Study the art forms associated with the ancient Maya beliefs and compare with the art forms used by the modern Maya.

Creencias mayas: Identifique las creencias relacionadas con el arte antiguo maya. Demuestre de que manera expresan estas creencias los mayas en su pintura, su arquitectura y su escultura. Haga una comparación entre sus antiguos símbolos favoritos y otras creencias culturales. Haga una línea de tiempo y muestre cuando cambiaron sus creencias. Examine las obras de arte de los mayas antiguos relacionadas con sus creencias y compárelas con las obras de arte de los mayas modernos.

Human Characteristics: Identify the human activities of the Maya as discovered on or with the art of the Maya. Identify the art forms (for example, painting, architecture, and sculpture) which best describe the activities of the Maya. Make a timeline showing when the Maya artists and architects changed their art forms to show new and different kinds of activities taking place. Match the art forms associated with the activities.

Características humanas: Identifique las actividades humanas descubiertas en o con las obras de arte maya. Identifique las obras de arte que expresan más cabalmente las actividades mayas (ejemplo, la pintura, la arquitectura y la escultura). Haga una línea de tiempo mostrando cuando cambiaron los artistas y arquitectos sus obras, expresando nuevas y diferentes actividades mayas.

Population: Describe what the Maya looked like as viewed by the Maya artists. What was the role of women and children in Maya art? What were some of the natural pressures on population growth?

Población: Describa como eran los mayas, de acuerdo a las representaciones hechas por los artistas mayas. ¿Qué papel tenían las mujeres y los niños en el arte maya? ¿Qué presiones naturales existían para el control de la natalidad?

Settlement Patterns: Study the work of the Maya architects. How many times did architects change or rebuild the places where the Maya settled? In which locations were the settlement changes the greatest as expressed in the architecture renovations? Describe placement of Maya monuments within the ceremonial complex.

Los modelos seguidos en los asentamientos humanos: Examine la obra de los arquitectos mayas. ¿Qué tantas veces cambiaron o reconstruyeron los sitios donde se establecían los mayas? ¿En qué lugares se nota el mayor número de re-ubicaciones dadas las remodelaciones arquitectónicas? Muestre la ubicación de los monumentos mayas dentro del centro ceremonial.

Physical characteristics of land forms: How did the physical characteristics of the land affect placement of the cities? Did they make an impact on where the artists had their workshop locations or the kinds of materials they used? How did the land affect the location or type of architecture? Describe in a paragraph, one of the geographic features of the Maya region (lowlands, highlands).

Características del terreno: ¿Qué tanto influyeron las características del terreno en la ubicación de las ciudades? ¿Cómo influyeron éstas en la localización de los talleres de los artistas o de los materiales que utilizaron? ¿Qué tanto influyó el terreno en el tipo y localización de su arquitectura? Describa en un párrafo una de las formaciones geográficas de la región maya (tierras bajas y los altos).

Physical characteristics of water bodies: How did the physical characteristics of the water bodies influence Maya art? Did they make an impact on where the artists had their workshop locations or the kinds of materials they used? How did the water bodies affect the location or type of architecture? How did the water bodies affect the type of symbolism used by the Maya in their art and beliefs?

Características de las masas de agua y sus parámetros: ¿Qué tanto influyó en el arte maya la cercanía al agua? ¿Influyó ésto en la ubicación o en el tipo de materiales que usaron? ¿Qué tanto afectó esta condición geográfica el modelo arquitectónico o su localización? ¿Qué tan notable es la influencia del agua en los símbolos utilizados por los mayas en su arte y en sus creencias?

Name_____ Date_____

The Maya and Their Environmental Resources

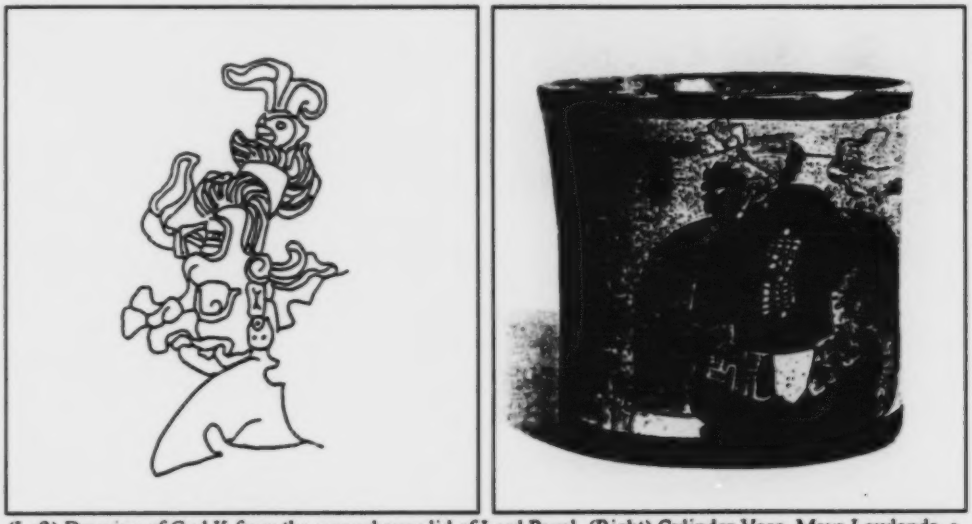
Fill in the chart below to retrieve information about some of the resources represented and used in Classic Maya art.

Art Forms	Sources of Art Materials	Sources of Imagery from Nature	Other
Glyphs			
Sculpture			
Ritual Objects			
Ceramics			
Costumes			

Obsidian and Pyrite as Environmental Resources for Mirrors

Iron-pyrite is one of the most widely distributed constituents of the earth's crust. It is the only mineral sulphide with a metalic luster which is used for ornamental purposes.[1] Another natural resource with a luster is obsidian. This natural glass substance is a product of volcanic erruptions. The Maya used both pyrite and obsidian for making mirrors. Mirrors of several types have been excavated from important Maya tombs and included polished pyrite-mosaic plaques which had been glued to a backing. Sometimes the mirrors of pyrite were cut into polygonal shapes and fitted into circular slate disks.[2] Seven mirrors were found on or near the corpse in one tomb, while an early classic tomb at Nebaj contained no fewer than 40 mosaic mirrors. Some mirrors were made of obsidian and pierced for suspension, and probably worn around the neck.[3]

In many Maya communities, the mirror image was important in manifesting Maya rulership. The supreme symbol of the deity of royal descent was known as the *Dark Tezcatlipoca* ('Smoking Mirror').[4] In many images the grasping of a mirror symbolizes accession to rulership. Because mirrors were important in embodying Maya rulership, the ruler was the mirror of the people, in some Maya communities. On clay pots, such as the one pictured here, the ruler gazes at himself in a dark (obsidian?) mirror framed by wood, held by a subordinate (not visible in this view, but the object of his interest). God K is one of the deities associated with a mirror. He has the mirror glyph fixed in his forehead. This is the same glyph that is used in Maya art on the bodies of the gods to identify them as divine. From this mirror glyph on the god's forehead there emerges an ax-like tool with wisps of smoke coming out.



(Left) Drawing of God K from the sarcophagus lid of Lord Pacal. (Right) Cylinder Vase. Maya Lowlands. c. A.D. 672-830. Ceramic with red, red-brown, orange, black and blue on speckled yellow-cream slip. H: 11:5 cm. x Diam: 11.8 cm. B-569. Dumbarton Oaks Collection. © 1994 photograph Dumbarton Oaks Research Library and Collections, Washington, D.C.

[1] Max Bauer *Precious Stones* Volume II New York Dover Publications, Inc 1968 p. 532
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period* Durham Duke University Press, 1994 p. 322
[3] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period* Durham Duke University Press, 1994 p. 322
[4] Benson, Elizabeth and Gillett G. Griffin, editors. *Maya Iconography* Princeton University Press, Princeton, New Jersey 1988 p. 227

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Maya Market Members

Introduction

The following information[1] and activities are to be used in conjunction with the study of a Maya pottery vessel. For the purposes of this lesson, actual information about the Buenavista Vase has been chosen.[2] However, any artifact may be substituted. In this activity, students act as members of a Maya market for artifacts. As part of this activity they will learn about members of the Maya market, and then prepare a script as a team for a classroom performance.

Divide the class into about eight groups of Maya Market Members: Archaeologists, Epigraphers, Art Historians, Government Employees, Looters, Museum Curators, Scientists, and Photographers. Distribute the identities of the Maya Market Members to each group (cooperative group work) to read together, discuss, and make inferences about what the information tells them about the responsibility these market members have toward an artifact.

Next, distribute the corresponding questions to each student in the group (individual assessment) to be discussed and recorded.

Divide the class up again. This time each group will prepare a performance. Each performance group will have at least one Maya Market Member. The group will write a script and develop a performance to share with the class. Members can devise their own pottery vases, costumes, and props.

Pull together the best elements from each performance group and go on the road with the show. For example, students might visit other classrooms in their school or elementary classrooms in feeder schools/districts.

The Buenavista Vase

The Photographers:

1. At the burial site, the photographer takes a picture of the vase to show the condition it was in when it was found and its relationship to other objects in the tomb. A photograph of the burial is a necessary ingredient.
2. For research, two different types of photos are required of the vase: selected views, and a "roll-out." A roll-out is a photograph which looks like all the images on the vase have been "rolled" off on a flat surface. The cover image is a "rollout" of the Buenavista Vase.
3. The photographer confers with the epigrapher to learn where the first hierogylph of the statement appears on the rim of the pottery vase.
4. The photographer confers with the art historian to learn where the major image on the vase is located if more than one scene is represented.
5. A special strip-camera setup is built to take a roll-out photograph.
6. A rotating turntable holding the vase is synchronized with a motorized 120 millimeter camera with 2 1/4" film.
7. The speed of the moving film and the width of the slit in the shutterless camera determine the exposure.
8. The color film has a 160 ASA and is designed for use with Tungsten lights.

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[1] This lesson was adapted from the information in Dorie Reents-Budet. "Collecting Pre-Columbian Art and Preserving the Archeological Record." *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 290-311.

[2] See © 1993 cover roll-out photograph by Justin Kerr

Government Employees:
1. To protect cultural resources, the government employee enacts laws against looting and smuggling of artifacts.
2. The government tries to enforce the laws it has made, but there are not enough employees to do the job.
3. All levels of government try to protect archaeological sites and to prohibit the trafficking in artifacts.
4. The Department of Archaeology, the Ministry of Tourism and the Environment, The Department of Museums, and the Ministry of Education help to educate people concerning the value of protrecting their collective heritage.
5. The government registers artifacts owned by private citizens.
6. In 1970 UNESCO drafted an agreement on cultural property. Museums may only obtain artifacts that have been legally aquired. This document was signed at different times in different countries. It was signed in 1983 in the USA.
7. This vase is the property of the Department of Archaeology, Belize.

The Art Historian:
1. The pottery vase is painted in the Holmul style with red and orange paints on a cream-colored background. The slip paint is not very glossy. It has blue rims.
2. The iconography of the vessel shows people dancing. Two male figures appear to be dancing out of the underworld at the moment of their transformation into gods.
3. There are two complete pictures or scenes on the vase.
4. The lip and the base of the vase are painted with solid bands of orange. The upper rim is decorated with red and orange glyphs of equal height.
5. The artist who painted this vase was very talented. He did not sign this and three other known masterpieces attributed to him. His work was so beautiful it was unique. His glyphs were so distinctive, his signature wasn't needed. Several other artists signed their work, however.
6. This vase was probably used during important state rituals that were public proclamations of power.
7. The dancers face to the right instead of the left which was usual in this style. There are no dwarves or vertical texts on this vase.

Archaeologists:
1. The archaeologists who found the Buenavista vase are Joseph Ball and Jennifer Taschek of San Diego State University.
2. The vase was found in a burial at Buenavista del Cayo, Belize.
3. The vase was buried with a young adult male, a member of the local ruling elite. The elaborate costume he wore included hand coverings made from a jaguar pelt. He was also buried with eight thousand obsidian blades.
4. No other vase found in the area was exactly like the Buenavista Vase in style or paste composition.
5. The vase was probably a gift from Lord *K'ak'-Til*, the holy *ahaw* of Naranjo, to the ruler of Buenavista as a regal gift signifying social and political ties between them, or as a funerary offering for the tomb of the son of a ruler of Buenavista.

6. Politically, there is a connection between Naranjo and Buenavista del Cayo, because such a beautiful vase made for a ruler in Naranjo was found in the Buenavista tomb. It is the only surviving documentation of the historical connections between the two sites found thus far.
7. The archaeologists are respected because they did not take this vase out of the country without permission. It belongs to the people of Belize.
8. It is important to know why the archaeological excavation of sites and the collecting of documented art is advantageous to everyone.
9. The vase was shipped to the USA in fragments. It took more than a year to assemble. When the vase was restored, one piece was missing. The vase was assembled by Barbara Kerr, the wife of the photographer who took the cover photo.
10. The adhesive used to assemble the vase is a white glue (like *Elmers*) that is reversible.

Selected Glyphs on the Buenavista Vase

came into being, was blessed, his drinking vessel for tree-fresh cacao

Epigrapher:
1. The glyphs say this vase was a ritual drinking vessel made for Lord *K'ak'-Til*, the holy *ahaw* of Naranjo.
2. The glyphs are very large and painted in a style identified with this special artist.
3. The contents of the message includes: "[it] came into being, was dedicated his drinking vessel for tree-fresh cacao." It ends with the name of the vase's owner or patron, Lord *K'ak'-Til*, the holy *ahaw* of Naranjo.
4. The calligraphy style tells us the artist was very skilled. He has an excellent control of line.
5. Lord *K'ak'-Til*, the holy *ahaw* of Naranjo, was a very powerful ruler who reigned at at this ancient site from A.D. 693 to A.D. 719. The epigrapher has read this information about Lord *K'ak'-Til* in the texts found on nine stone monuments of Naranjo. Lord *K'ak'-Til* was victorious in wars against his neighbors and he used to be known as Lord Smoking Tapir.
6. On stela 22 at Naranjo, the text says Lord *K'ak'-Til* was victorious in war against the ruler of Ucanal on September 7, A.D. 698. The ruler's name was Lord *Itsaam Balam*. The ruler of Ucanal was taken captive during battle and brought to Naranjo as a humiliated prisoner of war. Lord *Itsaam Balam* is pictured as a sacrifice because he is seated on two femurs. The possibility exists that the artist of the vase was brought to Naranjo along with his ruler, as we know he painted a number of other vases with the Ucanal emblem glyph.
7. The glyphs were written in the Primary Standard Sequence (PSS). There are no vertical texts on this vase.

Scientists:
1. Neutron activation analysis of the vase gives a chemical identity of the pottery paste.

2. A vase's pottery paste is compared to potsherds of sites thought to be pottery workshops.
3. The chemical profile of the vase suggests it may have been made near Naranjo.

Looters:
1. Working fast, and without documenting their work, looters mine archaeological sites for artifacts.
2. The mining of a site requires the digging of large trenches in burial mounds or substructures.
3. Open trenches and unsupported burials can collapse, bringing down the whole mound and structures above. The collapse can kill the looter, cause damage to the buildings on top and all the information found within the platform.
4. The relationship of the artifact to other objects in the tomb is destroyed by looters when the artifact is removed.
5. Documentation of the historical moment is destroyed by the looter.
6. The market for ancient Maya artifacts is decreasing.
7. Looters often live in economically disadvantaged areas. They must search daily for some way to survive.
8. Looters contribute to the loss of the world's remaining cultural resources and heritage.
9. Art-exporting countries have economic, political, and social conditions that seem to encourage looting.
10. Some people who import art for their collections do not care about moral, ethical. or the legal issues regarding their acquisitions.

Museum curators:
1. The Buenavista Vase is a beautiful and intriguing object whose study and appreciation will enrich everyone.
2. The Buenavista Vase is on loan to Duke University. It is visiting the USA in a special exhibition on Maya pottery from the Classic period.
3. The museum curator is careful to borrow objects that are acquired legally in the country where the art works were found.

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Questions for Photographers:

1. List the equipment needed to photograph the Buenavista Vase

_____

_____

2. How can photographs of the Buenavista Vase help people learn about art or another culture?_____

_____

3. Why is it important for the photographer to know where the picture story and the hieroglyphs begin on the vase?

_____

_____

4. What would people have to do if there were no roll-out photographs to study a vase that has a wrap-around design?

_____

_____

5. What if there were no photographs of any Maya artifacts?

_____

_____

Questions for Government Employees:

1. Describe the ways the Belize government employees protected the discovery of the Buenavista Vase before it was uncovered by archaeologists or looters.

_____

_____

2. How do you suppose government employees educate people to prevent looting and smuggling of artifacts?

_____

_____

3. Why would private citizens want to register their artifacts with government employees?

_____

_____

4. What do you think is the best way for government employees in Central America to protect archaeological sites?

_____

_____

5. Why do you think it is important for government employees in Mesoamerica to protect archaeological sites?

_____

_____

6. Identify the reasons the government of Belize might want to work through many agencies to protect its treasures like the Buenavista Vase?

_____

_____

7. Do you think the government of Belize places more value on the collective heritage of the citizens of Belize than the USA does about it's heritage? Explain your answer.

_____

_____

Questions for Art Historians:

1. What do the pictures on the vase mean?

_____

_____

2. How do you know what style was used to paint the vase?

_____

_____

3. How does this vase differ from others like it in the same style?

_____

_____

4. How was this vase used?

_____

_____

5. What are the clues that indicate this vase was made by an ancient Maya artist?

_____

_____

Questions for Archaeologists:

1. What do you suppose is the reason for a missing piece in the restored Buenavista Vase?

_____

_____

2. Why do you suppose archaeologists collected the fragments of the vase and gave them to the museum in Belize?

3. Who found this vase, and where was it found?

4. Was anything found in association with the vase?

5. How unusual is this vase?

6. Do you think it was right to reassemble the broken vase and put it in a traveling exhibit? Why or why not?

6. What do scholars know about other things the artist has painted and the quality of his/her work?

Questions for Epigraphers:

1. What do the picture glyphs on the vase mean?

2. Who made this vase and who was it made for?

3. How do the glyphs help us to know when the vase was made?

4. How do the glyphs help us to know where the vase was made?

5. What manner did the artist use for writing a text on this vase?.

_____

_____

6. How is it that the owner of this vase could afford such a nice piece of art?

_____

_____

Questions for Scientists:

1. How do people know what this vase is made of?

_____

_____

2. Why are scientists interested in broken pottery?

_____

_____

3. Give some clues that would lead someone into thinking a place might be an ancient Maya pottery workshop location.

_____

_____

4. Could a scientist give an exact date of when this vase was made? (Explain)

_____

_____

Questions for Looters:

1. Describe the qualifications for becoming a looter.

_____

_____

2. Give several reasons why a career of looting is an unattractive one.

_____

_____

3. Why would a museum hesitate to show any object acquired by a looter?

_____

_____

4. What kind of destruction takes place when a looter goes to work?

_____

_____

Questions for Museum Curators:

1. Why do museum curators want to put objects on display like this vase?

_____

_____

2. How is it possible to actually see beautiful pottery without going to the country where it was found?

_____

_____

3. Why is it important for the museum curator to show only legally acquired art objects?

_____

_____

4. What would a museum curator want to say about the Buenavista Vase in a label for the general public?

_____

_____

5. What other objects might a curator put in a display case with the Buenavista Vase?_____

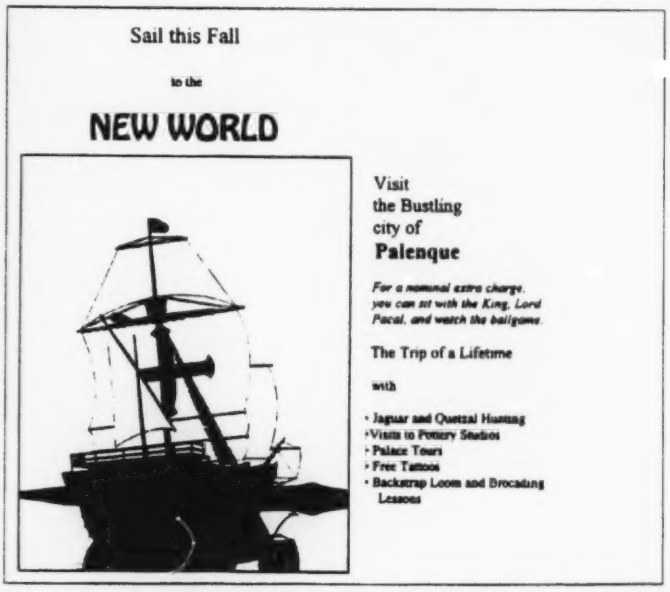
_____

Ancient Maya Travel Brochure

Pretend you are describing the Maya world to the travelers of 15th century Spain. What are the beautiful places to see, exciting things to do and watch, delicious things to eat and wonderful things to buy? In promoting tourism to "Mayaland," students might illustrate their brochures with ballgame architecture and pottery souvenirs. The travel brochure may be written in English with a translated section in Spanish.[1]

Materials:
Travel books and brochures to Mesoamerica in use by travel agents today. Markers or colored pencils. Paper. English-to-Foreign-language dictionaries.

Activities:
1. Explain the concept to the students.
2. Distribute sample brochures to students and allow them to read and study the format of several different brochures on Mesoamerica.
3. Guide a class discussion and list the common characteristics found in travel brochures. They usually have well-written, concise paragraphs, and focus on specific attractions such as food, shopping, weather, sites, and recreation.



4. Students will work in cooperative learning groups to write and publish a travel brochure to highlight one type of attraction or location. For example, one group might be responsible for architecture, and another might choose a city like Palenque.
5. Ask students to gather information about their selections and write rough drafts in the target language and sketch layouts of their brochures. Have the groups specify the criteria for good-looking brochures including simple layouts, bright colors, and interesting text.

[1] Ann H. Heidt, Editor, *America's Cup '92: Grades 6-8 Teacher's Guide*. San Diego: America's Cup Youth Education Program, 1991 p. 9

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Time Lines

Dates	Maya	Aztec	Inca
900-1000 AD	Chichén III		
700-900 AD	Late Puuc Chichén II Río Bec Edzná Early Puuc Becán	Xochicalco Cacaxtla Teotihuacán IV	Huari Moche V
500-700AD	Uxmal Chichén I Proto-Puuc	Teotihuacán III	Moche IV
300 -500AD	Oxkintok	Teotihuacán III	Moche III

This book is concerned primarily with the art and architecture of the Classic period. The book has divided the arts up by subjects, themes, media, products, function, design, and style. Another way to make the Maya art and architecture comprehensible to your students, is to organize art objects and architecture in a chronological fashion. A resource for time lines appears in the student text *Across the Centuries*. Here are some suggestions for time line activities.

• Because the Maya had several methods for recording time, students might make a 8-year or 104-year time line that gives all time in Maya terms. This could be displayed with a time line which is based on the calendar we use today. The Maya used a 584-day cycle with the 365-day annual cycle of Earth's years. When those two cycles were combined, they formed an eight-year cycle. The Maya also had a 260-day calendar. All three cycles match up every 104 years. The following chart is aproximate because not all dates were given in Maya terms in the adapted information.

• For each period a characteristic object is illustrated and accompanied by a short text outlining important historical and cultural developments.

• For each topic, such as subject matter, theme, product, function, etc., time lines may be designed. For example, the oldest cylinder vases designed for *cacoa* might be given first, and the most recent last. Or create time lines for architecture.

• Time lines might be developed by site. Compare, for example, the time lines for the monuments of Copán with those for Palenque, Quiriguá, and Tikal.

• A single time line might be developed by the students from their notes instead of parallel time lines. Art objects may be color coded for chronological placement.

Time Lines of Culture

Ancient Maya art and architecture may be divided roughly, chronologically, into three phases of cultural and artistic development: 1) Pre-Classic, 2) Classic, and 3) Post Classic. It is the Classic period that this book is most concerned with. Briefly, it is discussed below.

The Classic period of Maya culture began around A.D. 250 and lasted until about A.D. 900-950. This time period is marked by the development of mathematics, non-telescopic astronomy, calendrical calculations, great architecture, a highly developed writing system, the high art of vase painting, and elaborate ceramics. In the lowlands, the Classic is defined as the beginning of the stela-altar complex. This time period is divided into Early, Middle, and Late Classic.

Early Classic (A.D. 250-480)
The Maya culture showed a strong influence from the central valley of Mexico and the culture that lived at Teotihuacán at this time. Those from Teotihuacán actually set up outposts in the northern zone of Maya land. The eruption (A.D. 260) of Mount Ilopongo in El Salvador brought in a migration of new people from the south with new ideas, as shown by the increased use of mounds for houses and burials.

Middle Classic (A.D. 480-600)
Revealing much less of the Teotihuacán influence, the Middle Classic period (A.D. 480-600) coincided with the economic problems taking place there. Within the Maya land, those at the site of Caracol defeated Tikal in A.D. 556 and reigned over Tikal for the next 140 years. In the rest of the Maya area, archaeologists found a decline in the number of sites where the Maya erected dated monuments. They also found poorer burials and muted artistic expression.

Late Classic period (A.D. 600-900/950)
A rise in power of the local Maya leadership showed up in the Late Classic period (A.D. 600-900/950). Over 300 cities were found in the Maya area and as many as 60 kingdoms at the height of the Late Classic period. The population increased. Evidence of house mounds indicates there was a population of 400-500 per square mile around urban centers. The average family size was believed to be 5.6 persons. At Tikal, the population was estimated to be 500,000. The ruling elite may have encouraged population increases to support building programs, wars, and their elaborate life-style. Setting the stage for disaster was the clearing of more forest land for agriculture. This caused erosion, but the food was needed to support the increased population. The more people there were, the greater need the Maya had for increased social stratification and building. This caused more strife between the Maya city-states. On the other hand, this was a period of beautifully proportioned architecture, detailed inscriptions, and fine workmanship.

End of the Classic period (c. A.D. 700)
The collapse of the period began around A.D. 700 with a decline in learning, public architecture, and general aesthetics. But, it also brought about an increase in militarism, commerce, and strong ties with central Mexico, the Toltecs, and the Itza people. There had been no apparent attempt to promote political integration between city-states. The primary purpose of their wars seems to have been to take prisoners for the prestige of the conqueror and for sacrifice.

Maya Calendar Time Line for Classic Art

For this assignment you need:

- Pictures or drawings of Maya art objects
- Time-period labels
- A list of Maya art statements
- Scissors, tape/glue, construction paper or paper strips
- A Maya calendar

Classic Maya Dates
(approximate 104 year intervals)

A.D. 317 = 8.14.0.0.0. = 7 Ahau 3 Xul
A.D. 421 = 8.19.5.0.0. = 3 Ahau 8 Pax
A.D. 524 = 9.4.10.0.0. = 12 Ahau 8 Mol
A.D. 628 = 9.9.15.0.0. = 8 Ahau 13 Cumku
A.D. 736 = 9.15.5.0.0. = 10 Ahau 8 Chen
A.D. 840 = 10.0.10.0.0. = 6 Ahau 8 Pop

1. Cut out a paper strip and mark off the years by 104 or use the calendar dates above.[1]

2. Label each time period in bold along with the time span covering the period. Add the glyph symbols for Ahau, Xul, Pax, Mol, Cumku, Chen, and Pop.

3. Cut out the artistic statements and glue them down in the appropriate places on the time line.

4. Draw or select at least one art object to go with each given time period.

[1]Long Count and Christian correlations adapted by Josserand and Hopkins from S. G. Morley, *The Ancient Maya*.

Name _____ Date _____

Maya Time Cycles[1]

Materials: pencil, calculator

The modern Calendar is based on the solar cycle—the amount of time it takes the earth to orbit the sun. It is a 365-day cycle. The Maya calendars were based on three different cycles, as summarized below.

- The religious calendar consisted of a 260-day cycle (13 months, each of 20 days).
- The solar calendar consisted of a 365-day cycle (18 months, each of 20 days, plus 5 extra days).
- The motion of the planet Venus provided an additional 584-day cycle.

Days on which cycles coincided were important to the Maya. Suppose a 365-day cycle and a 260-day cycle both begin today. How long will it be until these cycles again begin on the same day? Consider the following questions.

1. Suppose the cycles are 2 days long and 3 days long and both begin today. How many days will it take for them to be "in phase" (or coincide) again?

_____

2. Suppose the cycles are 4 days long and 6 days long and both begin today. How many days will it take for them to be in phase again? (Be sure your answer is the ***minimum*** amount of time this will take.)

_____

3. In general, given cycles of n days and m days, both beginning together, how can you find the minimum amount of time for the cycles to be in phase?

_____

_____

_____

4. Suppose a 365-day cycle and a 260-day cycle both begin today. How many days will it be until the cycles are in phase again?

_____

5. How many solar years is this? (This period of time was known to the Maya as the *calendar round*.)

_____

[1] Adapted from *Multiculturalism in Mathematics, Science, and Technology: Readings and Activities*. Copyright © 1993 by Addison-Wesley Publishing Company, Inc. Reprinted by permission. p. 114

Nombre_____ Fecha_____

Ciclos mayas del tiempo[1]

Materiales: lápiz, calculadora

El calendario moderno está basado en el ciclo solar--la cantidad de tiempo que le toma a la tierra dar una órbita alrededor. Es un ciclo de 365 días. El calendario maya está basado en 3 ciclos diferentes, resumidos de la siguiente manera:

- El calendario religioso consistía de un ciclo de 260 días (13 meses de 20 días cada uno).
- El calendario solar constaba de un ciclo de 365 días (18 meses de 20 días cada uno, más 5 días extras).
- El movimiento del planeta Venus previa un ciclo adicional de 584 días.

Para los mayas los días en los que coincidían los ciclos eran importantes. Supongamos que tanto el ciclo de 365 días como el de 260 comenzaran el día de hoy. ¿Qué tanto tiempo pasará para que estos ciclos empiecen de nuevo el mismo día? Examine las siguientes preguntas:

1. Suponiendo que los ciclos son de 2 y 3 días de duración y ambos comienzan el día de hoy. ¿Cuántos días pasaran para que estén en "fase" (o coincidan) de nuevo?

_____

2. Suponiendo que los ciclos son de 4 y 6 días de duración y ambos comienzan el día de hoy. ¿Cuántos días pasaran para que estén en "fase" (o coincidan) de nuevo? (Asegúrese que su respuesta sea en el *mínimo* tiempo requerido).

_____

3. En términos generales, dados ciclos de *n* y *m* días, ambos empezando conjuntamente, ¿cómo se calcula el tiempo mínimo requerido para que éstos coincidan?

_____

_____

_____

4. Consideremos un ciclo de 365 días y uno de 260 días comenzando ambos el día de hoy. ¿Cuántos días pasarán antes de que coincidan los ciclos de nuevo?

_____

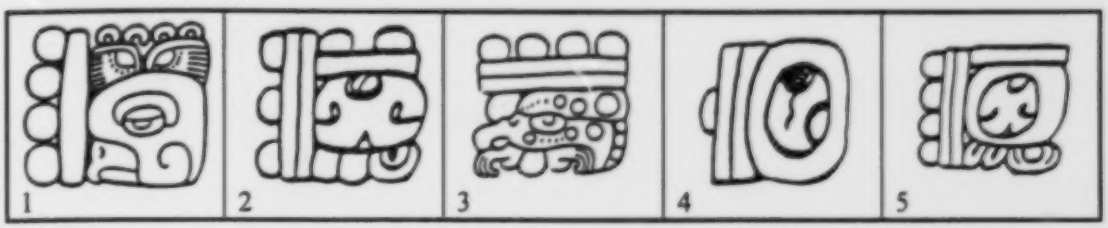
5. ¿A cuántos años solares corresponde ésto? (los mayas llamaban este periodo de tiempo *el calendario circular*).

_____

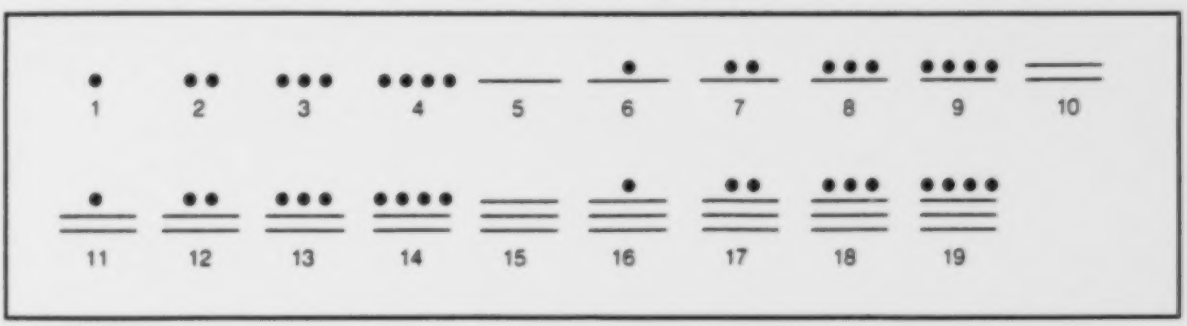
[1] Adaptado de *Multiculturalism in Mathematics, Science and Technology: Readings and Activities.* Derechos de autor © 1993-Addison-Wesley Publishing Company. p 114

An Ancient Numerical System

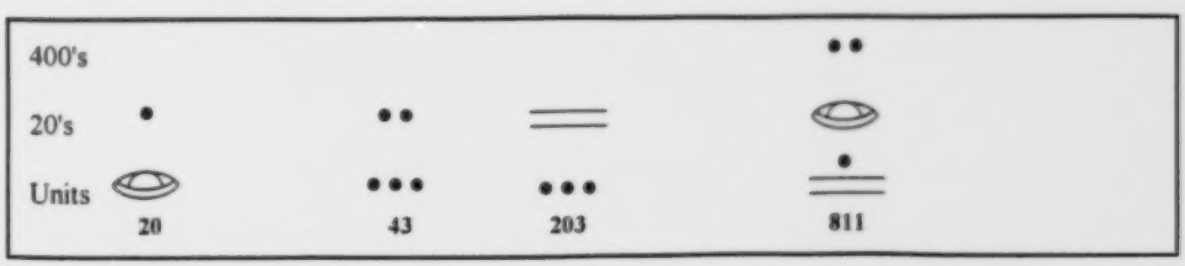
Among the Maya accomplishments was a numerical system which included a zero. The concept of zero is one of the most basic ideas in mathematics. Each of the Maya glyphs on this page has a zero in it. Although it may be difficult to imagine writing numbers without a symbol for zero, numbers were written that way for many centuries. Perhaps the earliest known use of a zero place holder was by the Maya.[1] Their place holder looked like an oval sea shell. The Maya were advanced in their use of numbers to record their astronomical observations in books and on stone and clay.



The Maya used a system of numerals based on the number 20. Dots and dashes were used to write numbers, as shown in the glyphs above and in the patterns below.



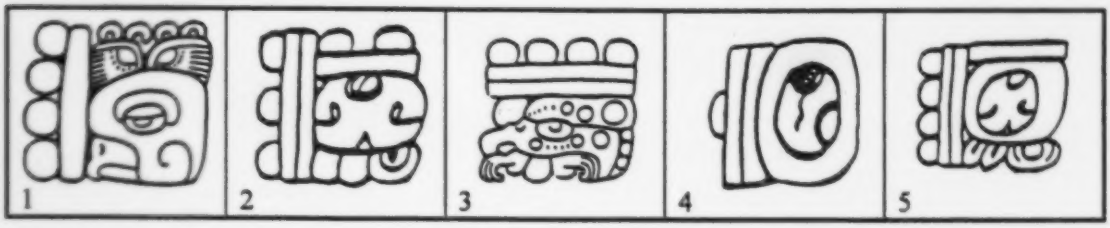
How did the Maya write numbers greater than 19? This was where the zero place holder was used. The Maya wrote their numbers in vertical columns with each row representing a power of 20. At most 19 units could go in any row. To communicate the number 20 the sea shell-shaped zero symbol was placed in the bottom row and a single dot was placed above it. Here are some examples of Maya numbers:



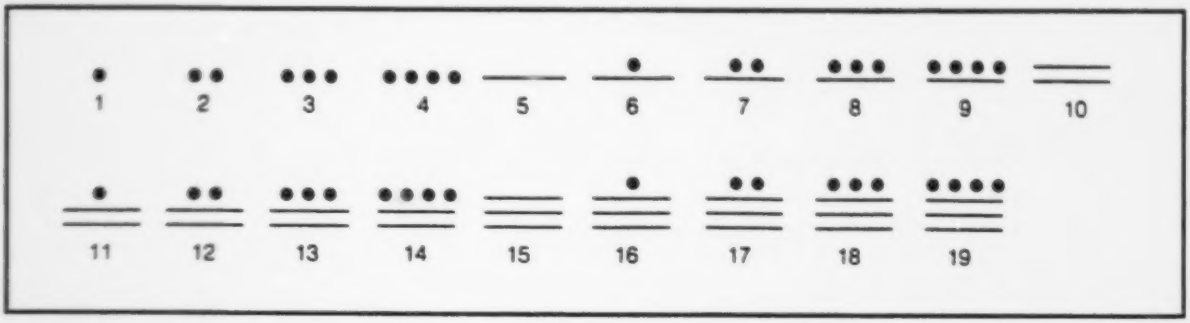
[1] Adapted from *Multiculturalism in Mathematics, Science, and Technology: Readings and Activities*. Copyright © 1993 by Addison-Wesley Publishing Company, Inc. Reprinted by permission. p. 111

Un Sistema Numérico Antiguo

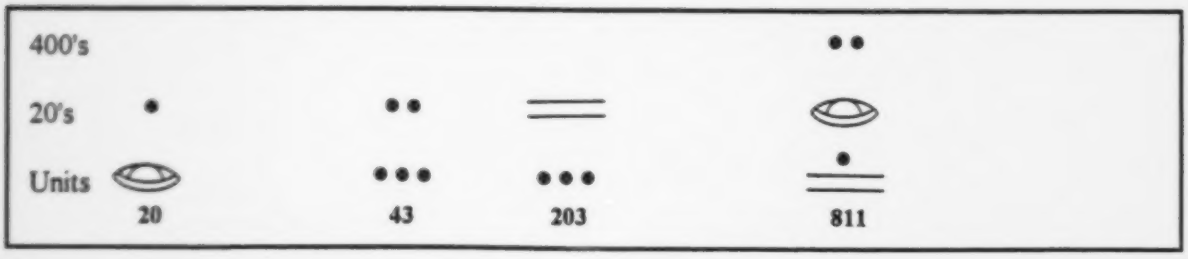
Entre los logros obtenidos por los mayas fue el de incluir el cero en su sistema numérico. El cero es una de las bases de las matemáticas. Cada uno de los glifos mayas en esta página contiene un cero. Aunque cuesta trabajo imaginarse como se podrían escribir números sin el cero, así se escribieron los números durante muchos siglos. La primera manifestación que se ha encontrado del uso del cero fue hecha por los mayas.[1] El dígito cero (0) se marcaba con una concha marina ovalada. Los mayas se adelantaron en el uso de los números para anotar sus observaciones astronómicas en libros, piedra y barro.



Los mayas usaban un sistema numérico basado en el número 20. Como se ve en los glifos anteriores y en la muestra inferior, se usaban puntos y rayas para anotar los números.



¿Cómo escribían los mayas los números superiores al 19? Ahí es donde usaban la concha marina para marcar el cero. Los mayas escribían sus números en columnas verticales, donde cada fila representaba un poder de 20. Sólo podían ponerse un máximo de 19 unidades en cada fila. Para representar el número 20 usaban la concha ovalada, y la ponían en la fila de abajo, con un sólo punto arriba de la concha. Aquí hay algunos ejemplos de números mayas:



[1] Adaptado de *Multiculturalism in Mathematics, Science and Technology: Readings and Activities.* Derechos de autor © 1993-Addison-Wesley Publishing Company, p. 111

Name _____ Date _____

The Early Days of Zero[1]

With their knowledge of astronomy and their efficient number system, the Maya were able to devise an accurate calendar. The Maya concept of time was cyclical, with no beginning or end. Instead, there were three main time cycles that repeated regularly. Days on which these cycles coincided were of special importance to the Maya.

1. Why do you think the Maya chose the number 20 as the base for their number system?

_____
_____
_____
_____

2. How did the Maya 's knowledge of astronomy help them develop an accurate calendar?

_____
_____
_____
_____
_____

3. In addition to the dates of the summer solstice and winter solstice, what might the Maya have learned at the Uaxactun observatory?

_____
_____
_____
_____
_____

4. The Maya concept of time consisted of several cycles that repeated over and over. Give an example of a cycle that is used in the modern calendar.

_____
_____
_____
_____
_____

[1] Adapted from *Multiculturalism in Mathematics, Science, and Technology: Readings and Activities*. Copyright © 1993 by Addison-Wesley Publishing Company. Reprinted by permission.

Nombre_____ **Fecha**_____

Los origenes del cero[1]

Con sus conocimientos astronómicos y su sistema numérico competente, el mayo elaborían un calendario preciso. El concepto maya era cíclico, sin principio ni fin. En cambio, habían tres ciclos de tiempo, que se repetían constantemente. Los días donde éstos coincidían eran de singular importancia para los mayas.

1. ¿Porqué piensa Ud. que los mayas escogieron el número 20 como base de su sistema numérico?

2. ¿De qué manera contribuyeron los conocimientos astronómicos de los mayas para elaborar un calendario preciso?

3. ¿Además de los solsticios de verano e invierno, que otros datos aprendieron los mayas en el observatorio de Uaxactún?

4. El concepto maya del tiempo consistía en varios ciclos que se repetían constantemente. Dé un ejemplo de ciclo que se usa en el calendario moderno.

[1] Adaptado de *Multiculturalism in Mathematics, Science and Technology: Readings and Activities.* Derechos de autor © 1993 Addison-Wesley Publishing Company, p 114

Name_____ Date_____

Maya Bar-and-Dot Number Identification

Identify the numbers associated with each glyph. The number one was one dot. The number five was a bar. The number eight was three dots and a bar. Two bars were used to identify ten.

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

10._____

11._____

12._____

13._____

14._____

15._____

16._____

17._____

18._____

19._____

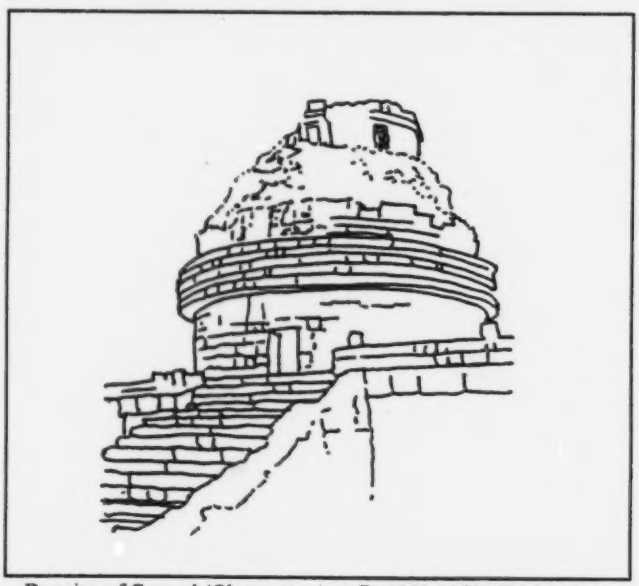
20._____

Astronomy

There were many ancient Maya scientists who understood and studied astronomy and mathematics. Those who studied astronomy built solar observatories and calculated the movements of planets without telescopic equipment. They tracked lunar cycles, the seasons, equinoxes, solstices, and predicted future eclipses. One of the stela at the site of Copán, Honduras, records a solar eclipse in A.D. 756.

From two books of the Maya,[1] we know they knew that, on average, Venus appears in the morning sky for 236 days, disappears for 90 days, then appears in the evening sky for 250 days. After disappearing again for eight days, the planet reappears in the morning sky, completing a cycle of 584 days. The Maya found there was an association between the 584-day cycle with the 365-day annual cycle of Earth's years. When those two cycles were combined, they formed an eight-year cycle. In eight years Venus goes through five of its 584-day cycles. These two Maya books also relate these two cycles with the 260-day Maya calendar. All three cycles match up every 104 years. The Maya astronomers thought Venus was a star. They recorded celestial motions and wrote them down in these books which told them when they were to go to war, conduct sacrifices, and lots of other things.

When the planet Venus appeared in the heavens, there was war. Recent discoveries at archaeological sites in Mesoamerica suggest warfare was more than a way of life for the people who once inhabited those places. These wars were more like ritual sacrifices or political assassinations. Mesoamerican Venus cults associated the planet's cycles with the violent transformation of the blood of sacrificed victims into water and fertility.[2]



Drawing of Caracol (Observatory). A.D. 1000-1250. Chichén Itzá.

[1] Dresden and Grolier codices.

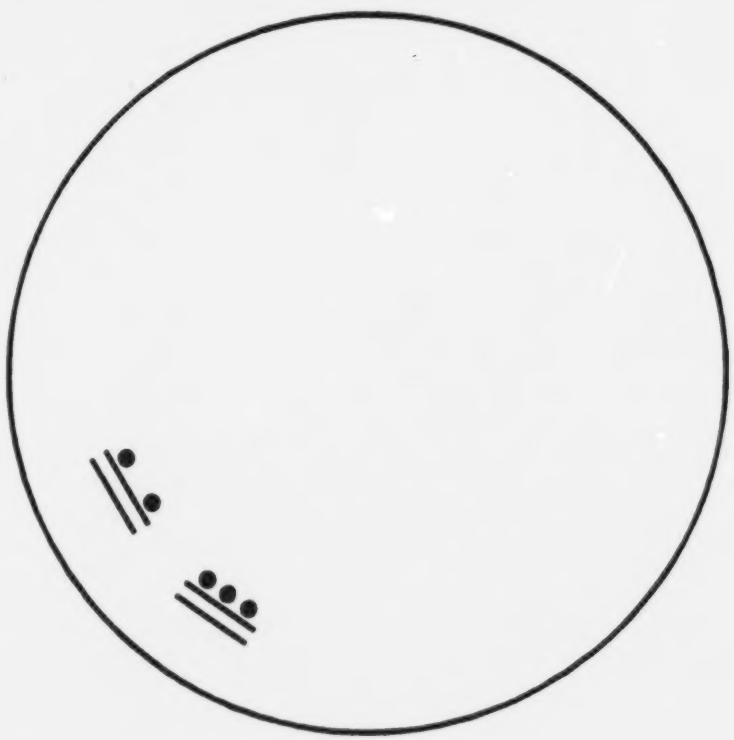
[2] John Carlson, Director of the Center for Archaeoastronomy at the University of Maryland in College Park in Matt Crenson, "The Stars Once Guided Mesoamericans' War," *Dallas Morning News*, Star Wars Symposium, Austin, Texas, Spring 1994.

Calendar Numbers • Números del calendario

When the Maya used the Calendar Round, they estimated time in cycles of 260 days. To make this work, they ran two calendars at the same time. To try out the first cycle of 13 numbers and 20 named days, you will need two activity sheets. On this page a circle is given for the Maya numerals. The last two symbols for the Maya numerals "12" and "13" are marked for you. The circle on this page needs to have 13 notches. The circle on the next page needs 20 tabs that fit into the notches when the two circles are connected and turn, one upon the other, like gears.

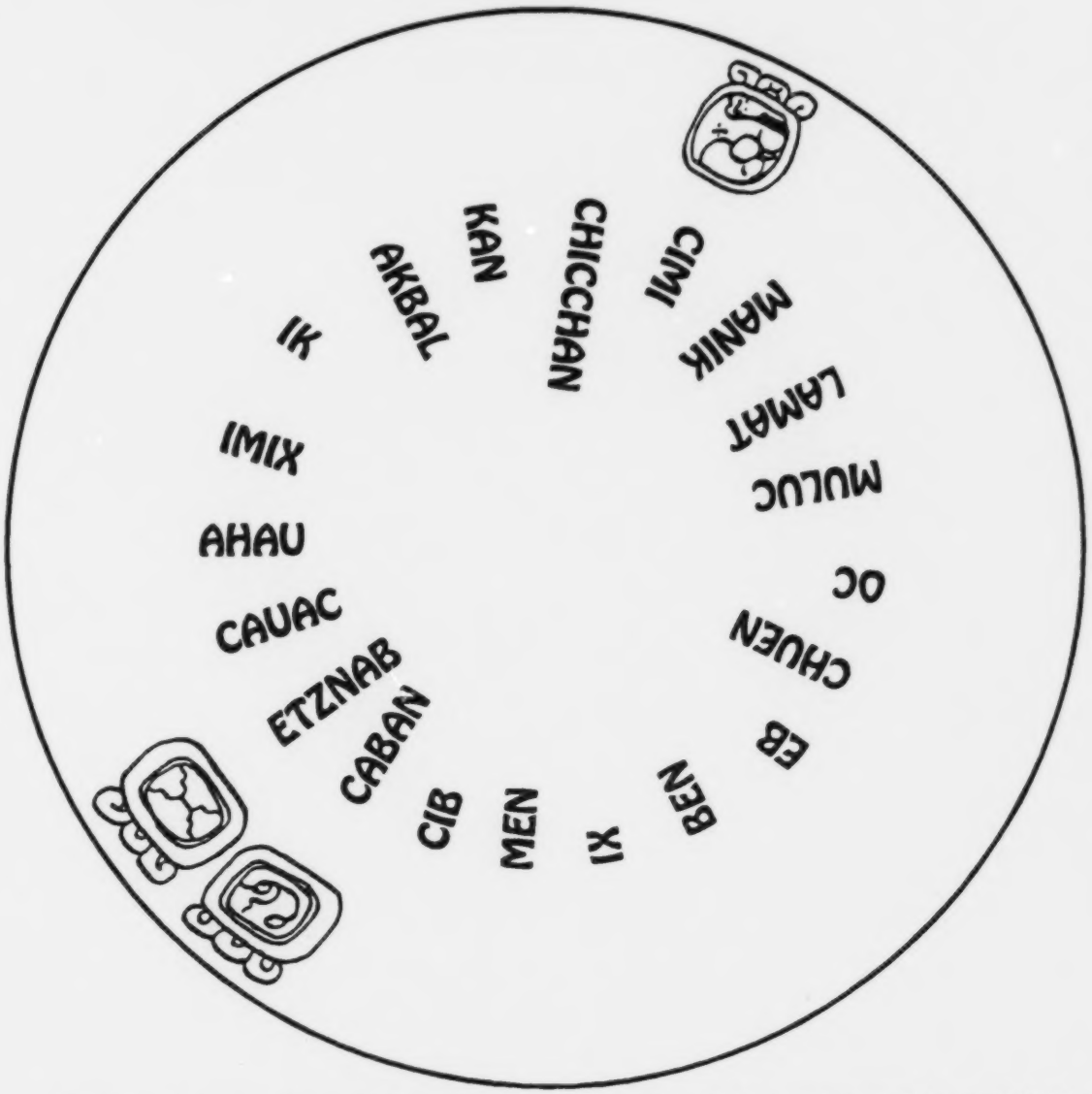
1. Divide the circumference of the circle into 13 equal parts.
2. Notch the circumference of the circle 13 times to fit the tabs you plan to design for the *Calendar Days Circle* on the next page.
3. On this page, mark each notch with Maya symbols for the numbers 1-11. The symbols for 12 and 13 are already in place.
4. Cut out this circle. Complete the *Calendar Days Circle*. Connect the two circles and rotate them together. Make observations about what takes place when you rotate the two circles together.

• El calendario circular usado por los mayas constaba de ciclos de 260 días. Para hacerlo funcionar, usaban dos calendarios simultáneamente. Necesitará dos hojas de actividades para poder poner a prueba el primer ciclo de 13 números y 20 días nombrados. En esta página se asignó un círculo para los números mayas. Se han señalado los últimos dos símbolos para las cifras mayas "12" y "13." Este círculo deberá tener 13 ranuras.



El círculo en la página anterior deberá tener 13 ranuras. Este círculo de abajo requiere 20 proyecciones que entrarán en las ranuras de la página anterior cuando se conecten los dos círculos y den vuelta, uno contra el otro, como un engrane.

1. Divida la circunferencia del círculo en 13 partes iguales.
2. Haga 13 ranuras que corresponderán a las proycciones que diseñará Ud. para el *Calendario Circular de los Días* que se encuentra en la siguiente hoja.
3. En la página anterior marque cada ranura con los símbolos mayas que representan los números "12" y "13" ya se encuentran marcados.
4. Recorte este círculo. Termine el *Calendario Circular de los Días.* Conecte los dos calendarios y hágalos girar uno contra el otro. Anote lo que sucede cuando giran los dos círculos conjuntamente.



1. Make 20 evenly spaced tabs around the outside of the circle. 2 Correctly draw or paste each day glyph by its name. • 1. Haga 20 proyecciones equidistantes en la circunferencia del círculo. 2. Dibuje o pegue cada glifo de los días con el nombre que le corresponde.

Calendar Glyph Clip-Art • Recortes artisticos de los glifos del calenario

Look through the list below of months and days for the glyphs you need for your calendar.
• Busque en la siguiente lista los glifos de meses y dias que necesitará para el calendario. •

AHAU

CIB

KAYAB

PAX

AKBAL

CIMI

LAMAT

POP

BEN

EB

MAC

UAYEB

CABAN

ETZNAB

MANIK

UO

CAUAC

IK

MEN

XUL

CEH

IMIX

MUAN

YAXKIN

CHICCHAN

IX

MULUC

ZAC

CHUEN

KAN

OC

ZOTZ

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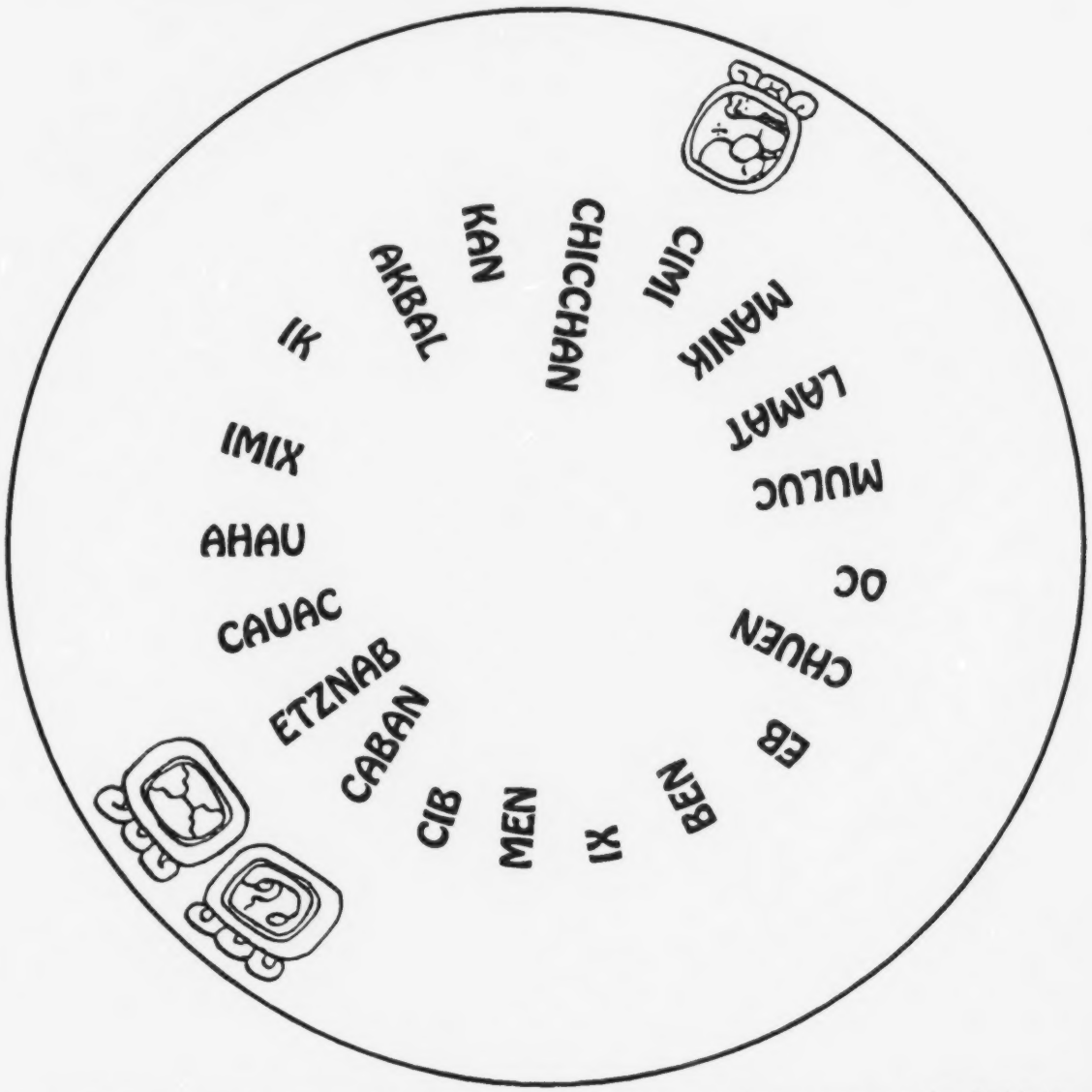
El círculo en la página anterior deberá tener 13 ranuras. Este círculo de abajo requiere 20 proyecciones que entrarán en las ranuras de la página anterior cuando se conecten los dos círculos y den vuelta, uno contra el otro, como un engrane.

1. Divida la circunferencia del círculo en 13 partes iguales.
2. Haga 13 ranuras que corresponderán a las proycciones que diseñará Ud. para el *Calendario Circular de los Días* que se encuentra en la siguiente hoja.
3. En la página anterior marque cada ranura con los símbolos mayas que representan los números "12" y "13" ya se encuentran marcados.
4. Recorte este círculo. Termine el *Calendario Circular de los Días.* Conecte los dos calendarios y hágalos girar uno contra el otro. Anote lo que sucede cuando giran los dos círculos conjuntamente.



1. Make 20 evenly spaced tabs around the outside of the circle. 2. Correctly draw or paste each day glyph by its name. • 1. Haga 20 proyecciones equidistantes en la circunferencia del círculo. 2. Dibuje o pegue cada glifo de los días con el nombre que le corresponde.

Calendar Glyph Clip-Art • Recortes artisticos de los glifos del calenario

Look through the list below of months and days for the glyphs you need for your calendar.
• Busque en la siguiente lista los glifos de meses y días que necesitará para el calendario. •

AHAU

CIB

KAYAB

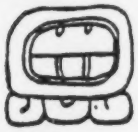
PAX

AKBAL

CIMI

LAMAT

POP


BEN

EB

MAC

UAYEB

CABAN

ETZNAB

MANIK

UO

CAUAC

IK

MEN

XUL

CEH

IMIX

MUAN

YAXKIN

CHICCHAN

IX

MULUC

ZAC

CHUEN

KAN

OC

ZOTZ

Cosmology

In the Maya belief system, the world had three layers: heaven, middleworld, and underworld. There were 13 superior heavens of gods and ancestors. The heavens were inhabited by *Oxlahuntiku* (Lords of the Day), represented by 13 numbers. The underworld consisted of nine inferior heavens occupied by *Bolontiju* (Lords of the Night). The underworld was also known as *Xibalba*, the world of death. Thirteen was a number belonging to men; nine belonged to women. Nine Lords of Darkness ruled over the nine moons of pregnancy.[1]

The Maya also believed the earth, the middleworld, was supported by 4 *Bacabs*, related to the cardinal points, and by 4 *Chaques*, helpers of *Chac*, the god of rain, and by 4 *Iques*, helpers of *Ik*, god of the wind. *Bacabs* were sometimes portrayed as an armadillo, a tortoise, a crab, and a snail. The earth sometimes is shown supported on the back of a crocodile.

Each cardinal direction had its own color. The center was blue-green. The north was white, east was red, south was yellow; and the west was black. Each direction had its own tree, bird, and gods. The gods had their own rituals.

The tree of center or the World Tree was portrayed as the sacred ceiba and penetrated all three domains of the world, with its roots in the underworld, its trunk in the middleworld, and its branches in the highest layer of the otherworld. The tree is also known as the *Wacah chan* and symbolic of the Milky Way.

The Otherworld, including both upper and lower worlds, was connected to the world of humans, the middleworld, by the *Wacah chan*. The axis of the world tree ran through the center of existence. The king was the human representation of the world tree.

'Cauac, an earth monster with the face of a man, represented the sun traveling under the earth at the end of the day. He is shown at the base of stelae, supporting rulers. The sun also walked the earth at night as a jaguar, whose spots represented the stars of the Milky Way.

The origins of life, the creation, according to the ancient Maya, took place in this order: 1) the earth and the seas, 2) animals, 3) experimental people of mud who were destroyed because they could not be upright or worship properly, 4) experimental people of wood who were destroyed because they were willful and did not worship properly, and 5) finally, because the gods used corn, the successful creation people.

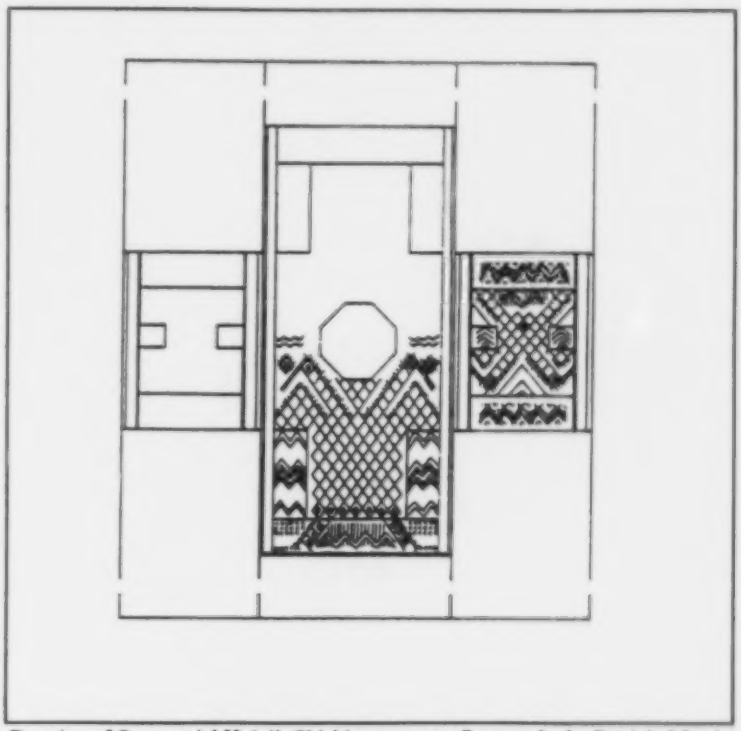
The ancestral Hero Twins are important in the creation story. One twin was suppose to become the sun, but he was hot-tempered and would have burned everything up. In some versions, he became Venus, in others, animals. The younger brother climbed on the roof of a house and became stronger every day. He climbed higher and higher and eventually became the sun. His mother was worried and tried to follow him, but could not go as high. She became the moon and follows the sun.

The Maya cosmos, according to Morris, a scholar who has studied extensively the textiles of the Maya, is represented in the brocaded symbols of huipils found in the Usumacinta Valley. He believes the mathematical nature of weaving has brought about the relationship to traditional numerology. Spatial designs and warping required precise counting. The diamond-shaped designs woven by artisans in Chiapas and Guatemala symbolize the stars, planets, the sun, and the cosmos in general according to his research. He has reported how the Maya numbers apply specifically to the textile pictured here.[2] In ceremonial huipils, repetitions of the same design indicate levels of

[1] San Diego Museum of Man. *The Maya, Folder VIII. Mini-Anthropology Handbook*. San Diego, 1992.
[2] Walter F. Morris, Jr. "Warped Glyphs: A Reading of Maya Textiles." p. 317.

the universe and the cyclical movement of time. One such design is the pre-Columbian bicephalous bird known as *Kot*. This eagle-shaped bird has one head looking upward toward heaven, and the other downward toward the earth. Filling the brocaded body are small points of color or stars. Across the breast there is a row of 13 stars. Below that are alternating rows of six and seven stars. There are nine stars in the neck and twenty stars in the wings of each Kot in the central panel. Venus, or the bright star, is represented above the double-headed eagle design by four spiky rhomboids. Around the neck of the ceremonial huipil a circle of silk spikes is embroidered to symbolize the sun. Black circles appliquéed on each sleeve represent the moon.

The Chichicastenango huipil is a simplified description of the sacred universe. When it is worn, the wearer is at the center of the universe with the sun. On all four sides are the moon, planets, stars, and the great god Kot.[1]



Drawing of Ceremonial Huipil. Chichicastenango, Guatemala, by Patricia Morris, c. end 19th century. Collection of the artist. Drawing reprinted with permission from the author.

[1] Walter F. Morris, Jr. "Warped Glyphs: A Reading of Maya Textiles." p. 319

Cylinder vase: Peccary and Turkey. Nakbé Region, Guatemala, Maya Culture, A.D. 672-830. Earthenware with black and red on cream slip. H: 13 cm. D: 11 cm. #1988.1172. Gift of Landon T. Clay. Photograph Courtesy, Museum of Fine Arts, Boston, Massachusetts.

Constellations in the Maya Zodiac

The vase pictured here is decorated with both a turkey and a snorting peccary (only the turkey is visible in this view). With great control of line and pattern, the artist gives a skillful interpretation of a bird, its tongue hanging out and eyes dilated in anger. Both the turkey and the peccary have been connected with the constellation of Gemini.[1]

Almost all ancient civilizations divided the sky into patterns to help them remember the stars more easily. Of course, the skys that were not visible to them were not charted. Modern astronomers have divided the sky into 88 regions, mentioning only one constellation for each part. In the constellations of Gemini and Leo the stars Castor and Leonis are classified as double stars, binary star systems which appear to the unaided eye to be one star. Sometimes these stars are bound together by gravity.[2] In our sky, Gemini is a white, white constellation that can be observed best in winter. Pollux is one of the two brightest stars in the constellation. It is in a class of stars that have a diameter 10-100 times larger than the sun.

When looking at animal-based constellations, scholars have even identified the jaguar as taking a place in the night sky. Therefore, it is possible the jaguar has a stellar counterpart in the Maya zodiac, too.[3]

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[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 253.

[2] Mark B. Peterson. *A Chart of the Heavens*. Salt Lake City, Utah: Hansen Planitarium. 1983.

[3] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 252.

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SUBJECTS 2

Seated Figure with Jaguar's Head. Veracruz, Mexico. Reddish-buff colored clay. A.D. 600-900. Maremont Collection. © 1994 photograph by Y. Lehmann, courtesy the Israel Museum, Jerusalem, Israel.

Subjects

(While displaying the picture on the other side of this page to students, you may find it helpful to refer to the text and questions on this side of the page.)

Subjects refer to any and all recognizable objects in the natural and man-made environment as well as objects that are the inventions of the artist's imagination, such as the images inspired by fantasy and feeling. All things that may be represented in a work of art such as people, thrones, and animals are subjects.[1]

Popular subjects with Maya artists included jaguars and people seated in cross-legged positions. Sometimes subjects are represented realistically and sometimes the subjects are conventionalized or stylized. The seated figure with jaguar emerging from his abdomen combines both the natural and stylized subjects of man and animal.

1. Describe the subject matter of this sculpture.

_____

_____

_____

_____

The man in a dignified position is rendered naturalistically. The jaguar with open jaws and outstretched claws is stylized. Their faces, animal and man, are approximately the same size. One face is positioned along the same vertical axis as the other. The symmetrical composition does not seem to deviate. Seated cross-legged, his hands firmly placed on his knees, the male holds his head up. His back is erect. A minimal costume completes the scene: a headdress of wrapped coil forms and matching anklets and wristlets made of a few straps.

2. Why do you suppose the artist combined man and jaguar the way he/she did?

_____

_____

_____

Serenity and calm are dramatically juxtaposed by the raging beast bursting out from the human. Sometimes movies in the 20th century have been made to illustrate what this transformaion might be like.[2]

3. Do you think the artist excelled in naturalism or a conventional /stylized look. Explain your answer.

_____

_____

_____

[1] Arthur Efland. *Planning a Balanced Comprehensive Art Curriculum*. Columbus, Ohio: State of Ohio Department of Education. Second Edition. 1992. p. 18.
[2] *The Guyver*, and the *Exorcist* series.

Lord Pacal

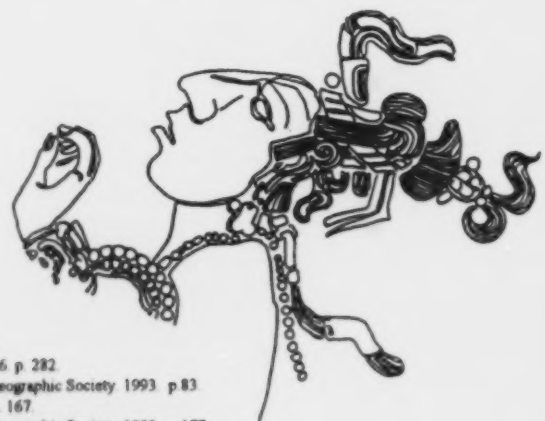
The genealogy of the Palenque kings extends for about 300 years from the rule of Chaacal I (A.D. 501) to the death of Kuk (A.D. 783). Lord Pacal was born on March 26, A.D. 603, and died August 31, A.D. 683.[1] During his life he traced his lineage back to a deity as well as to royal humans.[2] Towards the end of that period, during the reign of Lord Pacal and his son, Chan-Bahlum (A.D. 615-701), Palenque grew from a minor site to an important ceremonial center.[3]

Lord Pacal began ruling the city-state of Palenque when he was only six years old, with the help of his mother. In A.D. 615, when he turned 12, he became king in his own right. He ordered that the year of his accession be calculated into the future using the 80th Calendar round. This date has been found by scholars at the Temple of Inscriptions as October 23, 4772.[4] He seems to have married his sister, Lady Ahpo Hel, at one point.[5] During his 68-year reign, the city of Palenque flourished.[6] During a long lifetime of accomplishment, he brought Palenque into its own as a leading city of the Late Classic Period. Palenque was a remote and rustic village until the first third of the seventh century A.D. It flourished for 150 years and then no more associations can be traced to it.[7]

Artists have left pictures and information about Lord Pacal showing what he looked like. We know he was at least six feet tall.[8] There is even a hair style that is recognized as exclusively his:

"The hair is cut about ten centimeters long in front. This portion is then divided into three sections on each side. The two center sections are combed pompadour-fashion and then to the right and the left, directly over a third set of strands and above a narrow band embellished with flowers. This band goes around the head; it is underneath the hair at the rear and at the sides, which are cut in two steps. The upper portions of the top and rear rise high above the headband and flop toward the front in five bunches. One shorter bunch of hair is combed over the headband and over a shell-like comb and another cluster of hair on the left side.... The rear of the head, at upper ear level is shaved...and short hairs fall below it to a neatly trimmed cut at the bottom of the ears."[9]

Before he died, Lord Pacal planned and commissioned the Temple of Inscriptions, the building that would permanently memorialize him.



[1] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 282.
[2] Gene S. Stuart and George E. Stuart. *Lost Kingdoms of the Maya*. Washington, D.C.: National Geographic Society. 1993. p.83.
[3] Chicki Mallan. *Guide to the Yucatan Peninsula*. Chico, California: Moon Publications. 1987. p. 167.
[4] Gene S. Stuart and George E. Stuart. *Lost Kingdoms of the Maya*. Washington, D.C.: National Geographic Society. 1993. p.177.
[5] Howard La Fay. "The Maya, Children of Time." *National Geographic*. Vol. 148, No. 6, December 1975. p. 760.
[6] Beverly J. Armento, et. al. *Across the Centuries*. Boston: Houghton Mifflin. 1991. p. 407.
[7] Gillett G. Griffin. "Portraiture in Palenque." p. 140.
[8] Gene S. Stuart and George E. Stuart. *Lost Kingdoms of the Maya*. Washington, D.C.: National Geographic Society. 1993. p.84.
[9] Merle Greene Robertson, "57 Varieties: The Palenque Beauty Salon," *Fourth Palenque Round Table*, Vol. VI, 1980. p. 36.

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Sarcophagus Lid with Representation of Lord Pacal (rubbing). Palenque, Chiapas, Mexico. Rubbing by Merle Greene Robertson. H: 146 1/2" x W: 36". © 1976 photograph by Merle Greene Robertson, courtesy Pre-Columbian Art Research Institute, San Francisco, California.

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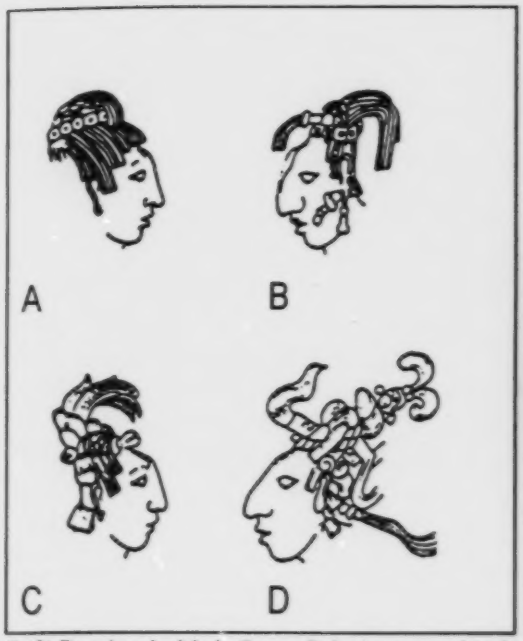

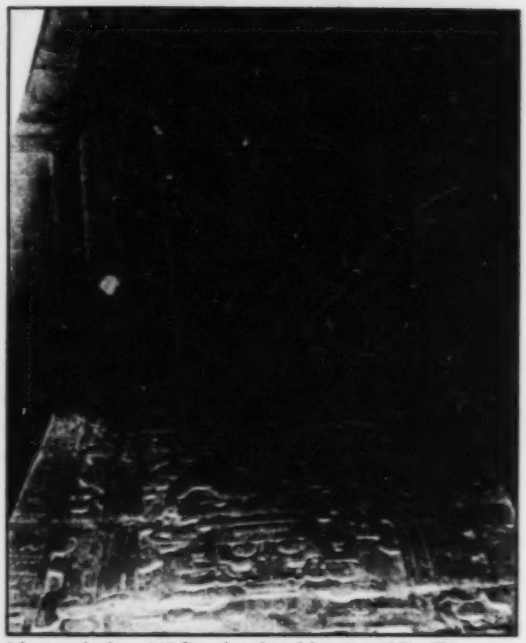

(Left) Drawings by Merle Greene Robertson, reproduced with permission. (A) Pacal as boy king (age 12). (B) Pacal's coronation or accession portrait. (C) Pacal's portrait as drawn from a stucco sculpture found under his sarcophagus. (D) God "K". (Right) Reproduction of Pacal's tomb at Palenque in the Museo de Antropologia, Mexico City. Photograph by Bill Measelle, courtesy San Diego Museum of Man.

The Crypt

The sepulchral chamber is actually excavated below ground level in bedrock.[1] To get to the crypt, one needs to descend a stair shaft of about 65 steps on two ramps, covered by ten levels of corbelled vaults in stepped ascent.[2] The crypt and stairs also have stone tie rods spanning the upper vaults instead of the customary wooden members.[3] On June 15, 1952, after three years of excavating, the Mexican archaeologist Alberto Ruz Lhullier[4] opened the chamber. His team, found nine larger-than-life images of priests modeled in stucco along the walls.[5] These sculptures were carved with beautiful robes and fantastic headdresses.[6]

Sarcophagus

Lord Pacal's sarcophagus was carved from a solid piece of very fine white limestone. Because it is larger than the entrance to the chamber, scholars believe it must have been in place even before the pyramid was constructed.[7] A body-shaped hole was cut into the sarcophagus for Pacal's royal remains. The interior of the hole is all red with cinnabar, the color of the east where the sun is reborn each day.[8] In death, Lord Pacal "entered the womb of the earth, and as a kernel of regeneration, he spawned the World Tree."[9]

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[1] Richard Townsend. *The Ancient Americas: Arts from Sacred Landscapes*. Chicago: Art Institute of Chicago. 1992.
[2] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 223.
[3] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 223.
[4] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 282.
[5] Charles Gallenkamp. *Maya: Treasures of an Ancient Civilization*. New York: Harry N. Abrams. 1985. p. 62.
[6] Chicki Mallan. *Guide to the Yucatan Peninsula*. Chico, California: Moon Publications. 1987. p. 171.
[7] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 282.
[8] Howard La Fay. "The Maya, Children of Time." *National Geographic*. Vol. 148, No. 6, December 1975. p. 760.
[9] Richard Townsend. *The Ancient Americas: Arts from Sacred Landscapes*. Chicago: Art Institute of Chicago. 1992.

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The sarcophagus rested on six piers. The exterior of the sarcophagus was carved with images of all the rulers of Palenque. The walls of the crypt around the sarcophagus were carved with buttresses.[1]

The Lid

The lid was quite unique in Maya funerary art. Some tombs at Palenque had no sarcophagus lids at all. Scholars wonder, because of its carving, if Lord Pacal's lid was intended for immediate burial, "or was it carved to instruct and inform literate moral viewers?" Could the family members and others make regular visits to see Lord Pacal's tomb?[2] The lid to the sarcophagus weighed about 5 tons.[3] The large tomb cover is 372 cm (146½") x 91.3 cm. (36"). The edges of the cover are 25.5 cm (10"). The exceptionally fine limestone that was used as the sarcophagus lid was usually reserved for Tablets or very fine relief carving.[4]

The inscription around the edge includes between the two figures on the north and south ends, two cartouches, each with two glyphs, which correspond to the names and emblems of the personages. These are thought to be the parents of the Lord of Palenque, Pacal II: Lady White Quetzal (Zak-Kuk) and Lord Yellow Jaguar-Parrot (Kan-Bahlum-Mo), associated with the Palenque emblem glyph.

On the lateral sides, the figures represent the ancestors of Lord Pacal II, with their respective cartouches of two glyphs naming the personages. It is believed from interpretations of these signs the woman plays a central role in royal power.[5] Texts found at other Maya sites show this as well.

Essentially a symmetrical composition within a border, Lord Pacal falls and descends into the gaping jaws of Xibalba, the Maya underworld. He is not alone, however. He sits upon the head of the Quadripartite monster (sun). Crossed circles, symbols of the sun, can be seen on each side of the monster's head. Above Pacal is the World Tree (axis mundi). On top of the tree is perched the Celestial bird, representing the upper world. The branches of the World Tree are rendered in the form of serpents. The remaining symbols help him defeat the lords of the underworld and to escape the jaws of Xibalba.

Pacal's mother Lady Zak-Kuk is depicted on both ends of the sarcophagus lid. A clubfooted uncle is also portrayed on the lid. He was beheaded about ten years before Lord Pacal ascended to the throne.[6]

When archaeologists finally lifted the lid of the sarcophagus, six months after entering the crypt, and recording everything they discovered there, they found another body-shaped sarcophagus which contained Lord Pacal's body.[7]

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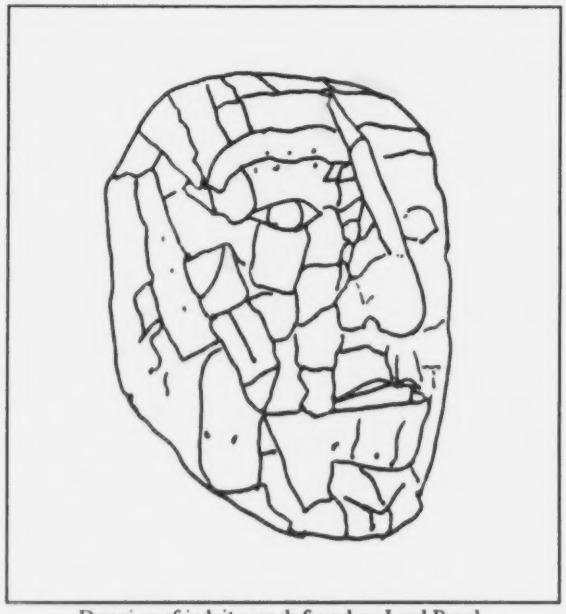
[1] George Kubler. *The Art and Architcture of Ancient America*. New York: Viking Penguin, 1990. p. 223.
[2] Gillett G. Griffin. "Portraiture in Palenque." p. 142.
[3] Hans-Dietrich Disselhoff and Sigvald Linne. *The Art of Ancient America*. New York: Greystone Press. 1966. p. 115.
[4] Gillett G. Griffin. "Portraiture in Palenque." p. 142.
[5] John P. O'Neill, Editor in Chief. *Mexico Splendors of Thirty Centuries*. Boston: A Bulfinch Press Book. 1990. p. 146.
[6] Gillett G. Griffin. "Portraiture in Palenque." p. 147.
[7] Chicki Mallan. *Guide to the Yucatan Peninsula*. Chico, California: Moon Publications. 1987. p. 171.

Lord Pacal in Death

Lord Pacal may have died when he was 80 years old.[1] We have several images of him in his afterlife pictured in this book: one on the cover of the coffin where his body was laid to rest, and others on panels from the Temple of the Cross and the Dumbarton Oaks Tablet.

Lord Pacal's Body

Pacal was buried with his head oriented to the north like every other burial recorded at Palenque[2] His clothing was gone and he wore a life-sized mosaic mask of jade fastened to a wood backing. His eyes were represented with shell and obsidian.[3] Symbolically, this green mask would have transformed the face of the elderly ruler into that of young maize for all eternity. As the kernel of regeneration, he would bring forth the World Tree.[4] Under the mask his own teeth were painted red.[5] He was wearing hundreds of beads of light-green jadeite, rings on each finger, ear plugs of jade and mother of pearl, several necklaces of tubular jade beads and other ornaments of the same material.[6] A large jade was held in each hand and another placed in his mouth.



Drawing of jadeite mask found on Lord Pacal.

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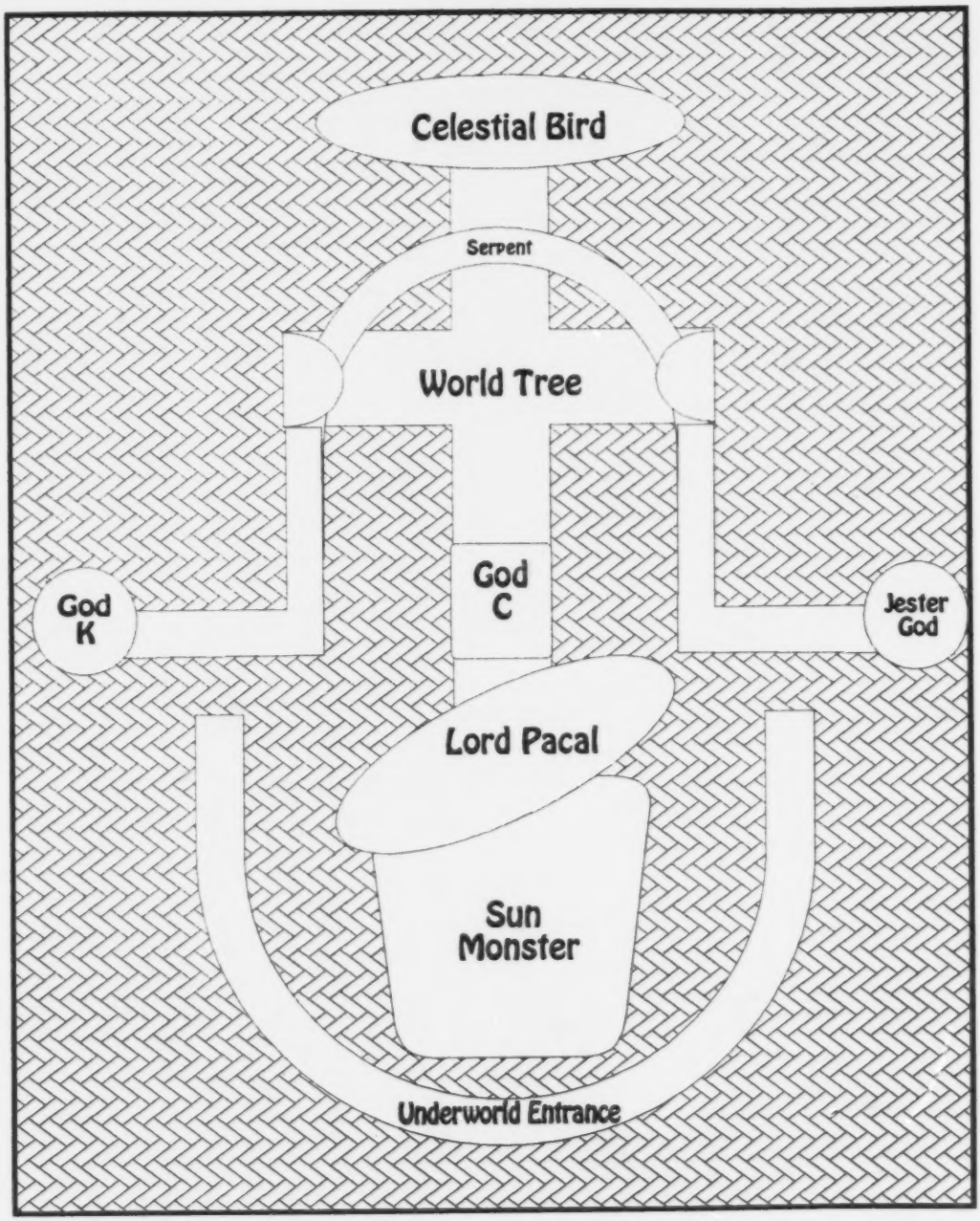
[1] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin. 1990. p. 497 (27).
[2] Elizabeth and Gillett G. Griffin, editors. *Maya Iconography*. Princeton: New Jersey: Princeton University Press. 1988, p. 316.
[3] Michael D. Coe. *The Maya*. New York: Praeger. 1971. p. 241.
[4] Richard Townsend. *The Ancient Americas: Arts from Sacred Landscapes*. Chicago: Art Institute of Chicago. 1992.
[5] Chicki Mallan. *Guide to the Yucatan Peninsula*. Chico, California: Moon Publications. 1987. p. 171.
[6] Hans-Dietrich Disselhoff and Sigvald Linne. *The Art of Ancient America*. New York: Greystone Press, 1966, p. 115 and Coe p. 105.

Pacal's Sarcophagus Lid



Pacal's Sarcophagus Lid Explained[1]

Celestial Bird
The Celestial bird is a symbol of the heavenly realm and the Big Dipper. He sits on top of the tree.

Serpent
This serpent has two heads with a god in the mouth of each one. Called a serpent bar, this is the symbol of Maya kingship. Wrapped around the World Tree, it represents the earthly middleworld.

World Tree
The sap of the tree is the medium through which the gods and the souls of the dead can pass. At the end of each branch, a bowl on end appears. These are the blood-letting bowls of sacrifice.

God K
This god is the obsidian mirror and god of blood sacrifice. The deity emerges from the western (left) side of the cross. The smoking celt or ax-like tool made of stone is associated with this god and emerges from his high forehead like a plume.

Jester God
This god is the god of kings. The deity is associated with the bright mirror.

God C
Representing blood and sacredness, this god is inscribed in the base of the tree trunk, partially covered by Pacal's body.

Lord Pacal
In his transition from life to death, Pacal is falling, anticipating the defeat of death. In his transformation, he becomes God K and wears the smoking celt on his forehead.

Underworld Entrance to Death
The lower half of the lid includes a "U" shaped container representing the entrance to the underworld. The "U" is actually a cut-away view of jaws of two dragons about to close over the falling body of Lord Pacal.

Sun Monster
The sun at the horizon is ready to disappear into the underworld. It will carry the dead king with it.

[1] This simple explanation from top to bottom, comes from a variety of sources: Lord Pacal's Sarcophagus Lid. Merle Greene Robertson, *Third Palenque Round Table*, Vol VI, 1980, Part 2. Austin: University of Texas Press. p. 82 (mourning and consolation). Schele, Linda and Mary Ellen Miller. *The Blood of Kings*. George Braziller, Inc New York and Kimbell Art Museum Fort Worth. 1986, p. 282. and *Fourth Palenque Round Table*, Vol. VI, 1980, p. 119.

The Mysterious Maya • Los misteriosos mayas

Create your own mystery using Maya artifacts from the past. The Maya believed their rulers were very important. One of the most important tombs found in the city of Palenque belonged to the ruler named Pacal. He may have ruled the city as many as 68 years before he died.

Directions: Select one or more works of art found in the tomb of Lord Pacal which were buried in the pyramidal tomb called Temple of the Inscriptions. A rubbing of the lid that sealed his body in his grave at Palenque is pictured here.[1] Write your own account of a mysterious event surrounding the object/objects you've selected.

• Invente su propio misterio usando artefactos mayas del pasado. Los mayas les daban mucha importancia a sus gobernantes. Una de las tumbas más importantes halladas en la ciudad de Palenque perteneció al gobernante Pacal. Se cree que el pudo haber gobernado esa ciudad durante 68 años, antes de morir.

Instrucciones: Escoja una o más obras de arte encontradas en la tumba piramidal del Señor Pacal, llamada Templo de las Inscripciones. Una impresión frotada de la tapa que cubría su cuerpo en la tumba de Palenque está reproducida aqui.[1] Escriba su propia versión de algún acontecimiento que haya ocurrido involucrando el(los) objeto(s) que haya seleccionado.

1. Stucco portrait heads • Cabezas de estuco
2. Jade mosaic face mask • Máscara de jade
3. Light-green jadeite beads, ear plugs, and rings
• Cuentas, orejeras y anillos de jadeita verde-clara
4. Sarcophagus lid • Tapa de sarcófago
5. Temple of Inscriptions • Templo de las Inscripciones

Remember to include some basic elements of story-telling as well as a description of the art object.
• Acuérdese de incluir algunos elementos básicos de narración al igual que la descripción de una obra de arte.

1. Setting the scene • Montaje de la escena.
2. Developing characters • Desarrollo de los personajes.
3. Describing the event or mysterious happenings
• Descripción de eventos o sucesos misteriosos.
4. Describing the object/objects
• Descripción de las obras de arte
5. Resolution (conclusion) • Culminación (conclusión)

[1] © 1976 Photograph by Merle Greene Robertson. *Sarcophagus Lid with Representation of Lord Pacal* (Rubbing) Palenque, Chiapas, Mexico. Reproduced with permission of the artist Merle Greene Robertson.

Name_____ Date_____

Match the Maya Hairstyles[1]

Put a check mark under the one picture in each row that is most like the sample. Write the numbers of the pictures you chose and explain the basis on which you made your choice.

Sample	*1*	*2*	*3*	*4*
God K				

I have chosen number___because_____

Lord Pacal (Boy King)				

I have chosen number __ because_____

Lady Ahpo-Hel				

I have chosen number __ because_____

Chan-Bahlum				

[1] All drawings by Merle Greene Robertson. Reprinted with permission.

	1	2	3	4
Lady Zac-Kuk				

I have chosen number __ because_____

Lord Pacal (Adult King)				

I have chosen number __ because_____

Maya Hair Days at Palenque

There are many basic hairstyles portrayed by the pre-Columbian artists of Palenque. Most of the styles of both men and women were at times enhanced with ribbons, beads, tiny gods, flowers, feathers, animal skins, combs, stuffed rolls of cloth, and horns. Study the illustrations given below. Pick five hair styles to write about. Make up a name for the hairstyles and describe how they were created.

1._____ 2._____ 3._____ 4._____ 5._____

6. _____ 7._____ 8._____ 9._____ 10._____

Nombre_____Fecha_____

Compare los peinados mayas[1]

Ponga una palomilla debajo del dibujo más similar a la muestra en cada fila. Ponga el número del dibujo que escogió y explique porque lo hizo.

Muestra	*1*	*2*	*3*	*4*
Dios K				

Escogí el número_____porque_____

Señor Pacal (Rey niño)				

Escogí el número_____porque_____

Dama Ahpo-Hel				

Escogí el número_____porque_____

Chan-Bahlum				

Escogí el número_____porque_____

[1] Todos los dibujos son reprodidos con el consentimiento de la artista Merle Greene Robertson

	1	2	3	
Dama Zac-Kuk				

Escogí el número_____porque_____

Señor Pacal (Rey adulto)				

Escogí el número_____porque_____

Peinados Mayas en Palenque

Existen muchos peinados basicos representados gráicamente por los artistas de Palenque. La mayoría de los peinados, tanto de hombres como de mujeres, eran a veces realzados con listones, cuentas, pequeños dioses, flores, plumas, cuero, peinetas, rollos de tela rellenada y cuernos. Observe los siguientes dibujos. Escoja cinco peinados sobre los cuales escribirá un comentario. Invente un nombre para cada peinados y describa como fur hecho.

1._____ 2._____ 3._____ 4._____ 5._____

6._____ 7._____ 8._____ 9._____ 10._____

Maya Militarism

The Early Classic period brought with it the idea of empires, where one city-state controlled another. Wars were fought for control of land, to control raw materials (salt, feathers, etc.), to obtain prisoners or slaves for work or sacrifice, or to get markets for trading.

Many of the wars were fought in the dry season. Between January and May, during the wet season, soldiers concentrated on farming. The first appearance of Venus as evening star signaled an auspicious day for raids as Venus was associated with war and all aggressive actions.

Raiding and warfare appeared to have increased as the Classic period progressed. This is verified by the increased representations of battles and captive figures in sculpture and murals. Prisoners of war may have been used for sacrifices or for laborers in a number of public projects.[1]

Some of the most exciting clay images created in Central America involve the military. The clay figure from Jaina, shown here with two views, is an exceptionally beautiful piece to look at because of the variety of textures and shapes and the confident pose. Notice, for example, the wonderful coils of clay (representations of fabric) that halo the warrior's head in contrast to the rectangular shapes of the torso and shield. The shield, as is usual in Maya art forms, is held in the left hand.[2] The way the fingers of his right hand form a circle suggests he held, at one, time, a long spear.

It is also a beautiful piece because there is rhythm in the repeated forms. The circular pendant and ear spools are wonderful complements to each other. The rectangular tabs on the shield take on a special look paralleling other shapes when one refers to the points of cloth extending from the warrior's headdress and neck like starched ribbons.

The military caste is known to have worn quilted cotton garments, large pectorals, and loin cloths.[3] This warrior does appear to have a long-sleeved tunic on, but it may not be quilted.

While the focus of this book is Maya, one can hardly resist an opportunity to compare what artists have created from two different areas. The Vera Cruz warrior from the Totonac Culture is a remarkable sculpture of clay. Formed from what appear to be tubes of clay, the warrior's upper body shape is elaborately covered with flattened pellets, coils, and "cocoons" of clay. The resulting textural surface is appropriately rough and forbidding in appearance. Even the paint added in brusque, quick strokes, invading on other forms like the headdress chin strap, is a comment on violation. The trapezoidal shield-like form in his left hand and the short dart-like object in his right hand appear to have been decorated with representations of feathers.

On the ceramic jar, look at one of the two almost identical figures. This warrior, like the other, is painted in a squatting frontal position, but his head is in profile. A frontal eye, wide open, is simply represented. The warrior before us, wearing a triangular nose ring, carries a small rectangular object in his left hand, perhaps a shield. The elaborate headdress and backdress have similar patterns of pointed feather-like forms. The figure is imaginatively "supported" by the join where the belly of the jar meets the cylindrical neck.

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[1] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 42
[2] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 143
[3] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 165

Standing Warrior. Jaina Style, Campeche, Mexico, Late Classic Maya Culture. Ceramic and painted pigment. A.D. 650-800. H: 31.2 cm. (Front and back views). 1963.272. Primitive Art Purchase and Edward E. Ayer funds. © 1993 photograph courtesy The Art Institute of Chicago, Chicago, Illinois.

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(Top right) Drawing of warrior on a vase. (Bottom left) **Warrior. Mexico, Vera Cruz, Totonac Culture, A.D. 400-800.** Terra cotta. H: 16¾" x W: 10¼" x D: 5¼". 1958.33. © 1994 photograph courtesy Worcester Art Museum, Worcester, Massachusetts. (Bottom right) **Maya Polychrome Ceramic Jar.** Late Classic Maya. Campeche, Yucatan Peninsula (?). A.D. 550-900. H: 13" x Diam.:11⅜" at rim. F78.75.1. Bowers Museum Foundation Collection. Anonymous gift. © 1994 photograph courtesy Bowers Museum, Santa Ana, California.

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Aesthetic Experiences from Art of Deformed Figures

Scholars believe dwarves played a significant role in Maya art forms. They have been represented on monuments, sculptured in the round in clay, sometimes as whistles, and painted on ceramics.[1] If looking at pictures or sculptures of deformed people made us unhappy, or sad, it would be unusual for any of us to look at them. Some people may feel sad or feel pity when they look at the sacrifices, dwarves, and other deformities represented in Maya art.

Why should anyone want to look at something that gives them negative emotions? People with deformities may have had special status. Scholars have tried to answer these questions. If the fear and pity we have for an event or a deformed person is real, we may find pleasure in distancing ourselves in an art form. When we do not feel ourselves involved or threatened, we can feel happy.

(Left) **Fat God Wearing Suit of Feathers**. Jaina. Gray clay. H: 11" x 5 ¾". (KS-405) # 56. On long term loan to the Fresno Art Museum, promised gift of Dr. and Mrs. Kenneth E. Stratton. © 1994 Photograph Courtesy Fresno Art Museum, Fresno, California. (Right) **Standing Figure.** Highlands Area, Guatemala. Coarse red clay. A.D. 900-1200. Maremont Collection. © 1994 photograph courtesy Israel Museum, Jerusalem, Israel.

[1] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985. p. 121.

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Standing Male Figure with Elaborate Floral Headress. Jaina Island, Mexico. Late Classic Maya Culture. Ceramic and painted pigment. A.D. 650-800. H: 15.6 cm. 1973.649. Restricted gift of Claire B. Zeisler; Maurice B. Galleher Fund; Mr. and Mrs. Milton W. Hirsch in honor of Allan Wardell. © 1994 photograph courtesy The Art Institute of Chicago, Chicago, Illinois.

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Delight replaces unpleasant emotions. Sadness can exist simultaneously with pleasure, but it is overwhelmed by pleasure. The pleasure more than compensates for the distress. If we look at a human figure with a huge head or belly, it may make us sad. But the beautiful way the artist balances a composition with oversized body parts, introduces characteristic gestures with skill, and develops beautiful textural patterns makes us happy and produces delight.[1]

Fat God Wearing Suit of Feathers

The kneeling figure wearing a turban has a very large head and belly. The artist who represented this deformed shape did it with such care and attention the viewer is delighted with the detailed garment (covered with a breech cloth) and the spangled turban. His costume covered with feathers may be some kind of military uniform. One of the reasons the figure may be dated as from the Jaina II period is the fact he is holding an object. The Fat God may even be a "chocolate merchant," the god of *cacao* who appears with a black face. This same god may be the north star god.[2] It is said that scribes wore spangled turbans. The round object under his left elbow could be a cymbal, fan, or part of a scribe's kit. The designed balance of the composition is very pleasing too. The sculpture appears to be divided into four equal parts: 1) turban, 2) head, 3) belly, and 4) the lower extremities. The repetition of the four similar shapes is a pattern that can certainly be appreciated.

Standing Figure

The grieving, woeful looking standing figure does not wear a skillfully produced costume or accessories. But the texture of the clay is coarse and grainy and in itself suggests tactile pain. It is the tilt of the figure, his gesture and facial expressions that charm and delight us.

Standing Male Figure with Elaborate Floral Headdress

This sculpture is remarkable for several reasons. The rounded repeating shapes in this sculpture have been modeled ever so convincingly and naturalistically. Without his legs, he appears to be kneeling, his body pitched slightly forward. So many aspects of this figure seem exaggerated, from the accessories to the abdomen, that one is almost certain this is a true-to-life portrait. Looking up at the viewer with bags under his eyes, the clay figure startles us with a face that may not be his own. The facial flesh that stops at the edge of his mouth might indicate he is wearing the skin of a sacrificial victim. The artist has captivated us then with mystery and naturalism set within a pattern of repeating curves.

Dwarf Figure

Beautifully preserved and designed is a small but impressive whistle of a dwarf wearing a headdress. This whistle is intriguing because of its asymmetrical composition. The points and angles of the headdress on the left side of the figure contrast dramatically with the curves seen throughout the rest of the design. They also complement the rectangular loin cloth. The standing figure takes on an aggressive pose. It even appears, in the raking light, that the left leg is moving forward into the viewer's space.

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[1] Marcia Muelder Eaton. *Basic Issues in Aesthetics*. Belmont, California: Wadsworth Publishing Company. 1988. pp. 39-41.

[2] Hope Werness, editor. Essay by Kathy Gill. *Pre-Columbian Sculpture Selections from the Collection of Kenneth E. Stratton and the Fresno Art Museum*. University Art Gallery, California State University, Stanislaus. 1994. #16.

(Left) **Seated Figure in Turban**. Campeche, Mexico. Limestone. c. A.D. 800. Maremont Collection. © 1994 photograph by Y. Lehmann, courtesy Israel Museum, Jerusalem, Israel. (Right) **Standing Figure with Tall Hat (Whistle).** Coarse red clay over a gray clay core. H: 5½" x W: 3" x D: 2". #91.45 (KS-427). # 54. Gift of Dr. and Mrs. Kenneth E. Stratton. © 1994 photograph courtesy Fresno Art Museum, Fresno, California.

The two deformed figures pictured here are created in different media. One was carved from stone, the other fashioned from clay. Both, however, have a minimum of accessories. The hats they wear are cone shaped and tip forward, one more than the other.

Seated Figure in Turban

The sculptor working in stone has done an exceptional job in representing the facial features and expression. The nose is beautifully formed and the teeth are bared. The rest of the figure is small and very abstract. The discomfort one has when sitting on something so high the feet don't touch the ground is certainly relayed in this image.

Standing Figure with Tall Hat

In the other sculpture, which is clearly of an adult with a small body, the artist delights us with curved and rounded forms. The short rounded arms, the oversized belly, head, and earplugs, all

give the viewer a sense of comfort in its smoothness. This man wears only a tall, tilting hat, ear plugs, and a loin cloth.

Another thought regarding the aesthetic experience has to do with feeling great because we are capable of feeling. Some people may deliberately put themselves in the presence of sad artworks because they take pleasure at their ability to respond as sensitive feeling people: we delight in the fact that we have the ability to respond with sadness.[1]

Summary:

The Maya represented deformed figures with only a loin cloth, and usually with a cap with a curled peak. Dwarves are often portrayed with the features of old men mixed with those of children. These short people were considered to have supernatural powers deriving from their chthonic origins. One association they had was with the four *bacabs* who supported the sky at the world's four corners.[2] There are several deformed figures of clay pictured in this book. The artists, however, presented their deformities with such charm, and gave them, in some cases, such elaborate detail, they are truly beautiful to look at.

Dwarf Figure. Maya. A.D. 600-800. Ceramic. H: 4½". AC1992.134.21. Gift of Constance McCormick Fearing. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California.

[1] Marcia Muelder Eaton. *Basic Issues in Aesthetics*. Belmont, California: Wadsworth Publishing Company. 1988. pp. 39-41.
[2] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985. p. 176.

Women in Maya Art

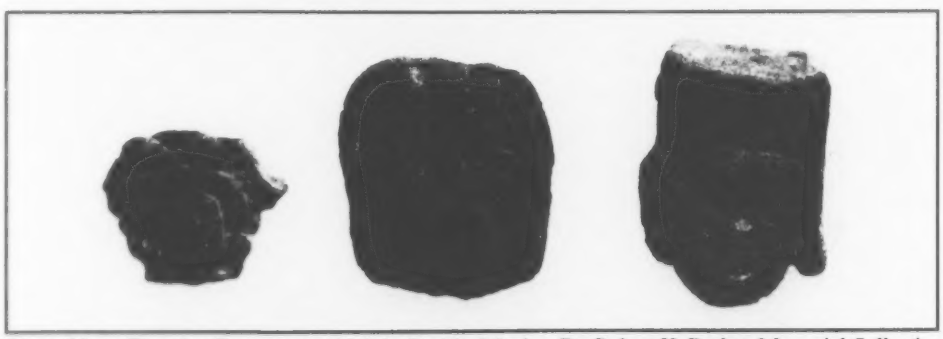
The status of women was accorded importance as shown in the archaeological evidence. The earliest burial of someone important found at Tikal was the rich grave of a woman. Two women ruled as true kings at Palenque and queens possibly ruled, probably as regents, at Coba, Caracol, and Naranjo.

Both matrilineal and patrilineal descendants were important in determining caste and status within a caste. One source says the *Bolon Dzacab*, the scepter figure held in many depictions of rulers, translates into English as "many matrilineages." At Naranjo, the King Smoking Squirrel showed only his relationship to his mother in sculptures. She was a princess from Dos Pilas; his monuments ignore his father.

Marriages were often arranged for political reasons, to forge alliances. Women probably carried substantial authority in the household and made many social and economic decisions.[1]

Maya Figurine Fragments

Many times when antiquities are found, they are broken. These fragments were found by the late Dr. Robert H. Barlow, formerly of the Carnegie Institute. They were donated in 1951 to the museum in his memory. They were found at Cholula, state of Puebla, near the Great Pyramid. For an activity, draw one of the heads on a piece of paper. Find some other heads that are not detached from sculptures. Draw the whole figure. Explain your reasons for selecting the look you have chosen. Investigate the procedures for giving something in someone's memory at your local museum.



Three Maya Figurine Fragments. Cholula, Puebla, Mexico. Dr. Robert H. Barlow Memorial Collection. © 1994 photograph courtesy Phoebe Hearst Museum of Anthropology, University of California at Berkeley, California.

[1] San Diego Museum of Man. *The Maya, Folder VIII. Mini-Anthropology Handbook*. San Diego: San Diego Museum of Man, 1992.

Seated Woman. Jaina. Clay. © 1994 photograph courtesy Dumbarton Oaks Research Library and Collections, Washington, D.C.

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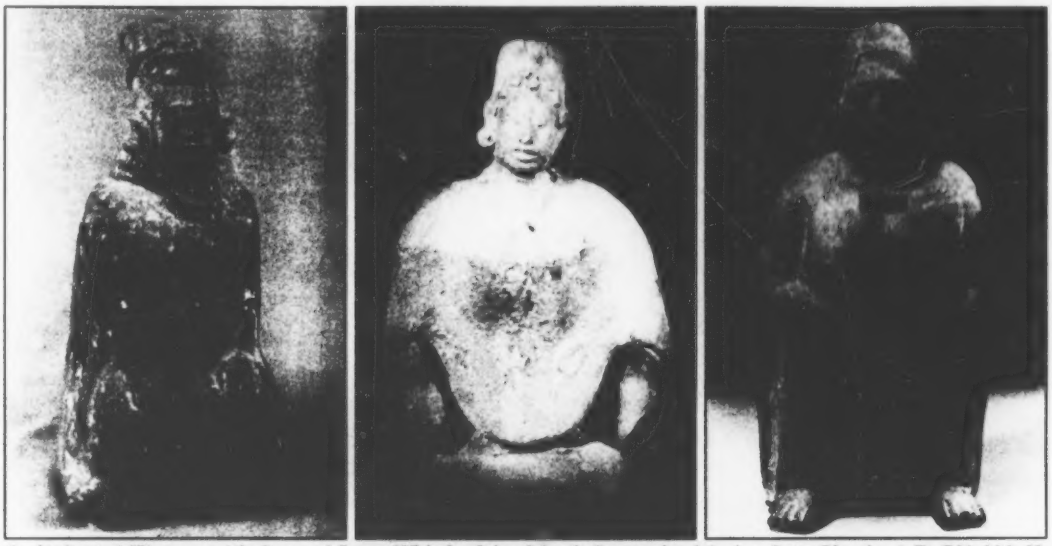
The four sculptures of Maya women in clay represented on these two pages standing or seated have many features in common. All of the women appear to be serene and possessive of a great deal of composure. Their elaborate accessories and clothing (for example, the diagonal-cut robe worn by one woman) give them a sense of excitement. They are three-dimensional clothed figures. Each of the women has facial scars or tattoos on her chin or mouth area. They wear accessories which include earplugs and bracelets.



(Left) **Seated Woman with Crossed Legs. Whistle. Jaina Island, Campeche,** Mexico. Late Classic. A.D. 750-900. H: 16 cm. x W: 7.3 cm. x Diam: 6.9 cm. 1985-33-9. Anonymous gift. © 1994 photograph by Linda L. Fisk courtesy San Diego Museum of Man, San Diego, California. (Center) **Ceramic Effigy Whistle**. Jaina Island, Campeche, Mexico. Late Classic. H: 7". Bowers Museum Foundation Collection. Gift of Dr. Russell Ludwick. © 1994 photograph courtesy Bowers Museum, Santa Ana, California. (Right) **Maya Female Dignitary**. Mexico. A.D. 600-900. 78.39. Salinger Fund. © 1994 photograph courtesy The Fine Arts Museums of San Francisco, San Francisco, California.

The standing figure appears to have a shortened body in a long gown with a detailed diagonal opening. Because she appears short, she may be a dwarf. A cylindrical object on her chest may be part of a necklace which is no longer a part of the sculpture. The tattoos that dot her face are confined to the side of her mouth and her chin.

Sitting cross-legged with her forearms raised is another serene-looking woman with a very elaborate hairdo and flowered headdress. The tri-part bouffant hairdo gives the figure added elegance with its unusual height. The tattoos on her face are barely visible under her chin. Three large bead shapes remain on her chest as part, perhaps, of missing "jadeite" jewelry of clay.

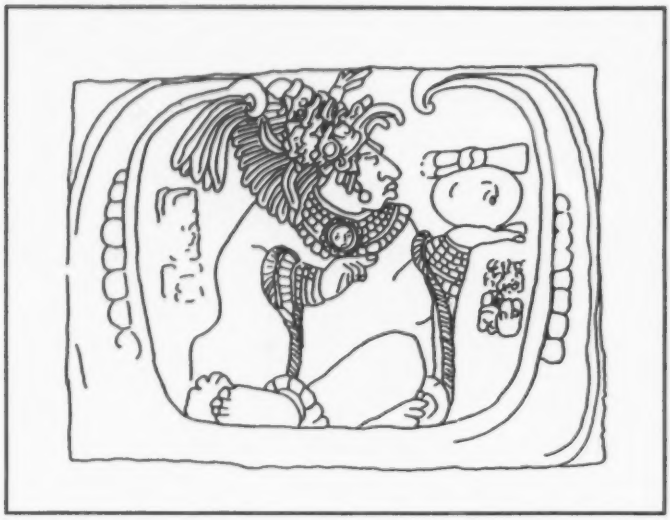
The sculpture of the woman wearing a short cape or *quechquemitl* is somewhat damaged with missing forearms. Her crossed legs and lap are actually the tiny "platform shape" that give this sculpture an upright position. Two line-like tattoos extend from either corner of her mouth on her tilted head. However, the graceful curves of the garment and her shoulders provide an illusion of mass and gentleness. There are many parts of her hairdo. Her hair is beautifully arranged in stepped fashion on her forehead hairline.

A clay whistle in the shape of a woman is also treated with much detail and care.

Name_____ Date_____

Comparing Sculptures of Women

The two seated women, in long garments with arms upraised, were made by ancient sculptors by different means. One sculptor carved the image of a member of a royal family within a hieroglyph frame, telling us she lived in Yaxchilán. The other sculptor modeled the woman from clay. Compare and contrast the similarities and differences. Select one of the two women to write about. Explain why you think the artist was particularly successful or unsuccessful in creating a work of art.



A

B

Similar characteristics: _____

_____

_____

_____

_____

Different characteristics: _____

_____

_____

_____

_____

The woman I wish to write about is:_____

_____

_____

Name_____ Date_____

Approaching a Sculpture
(From a Woman's Point of View)

Art images are not neutral. They inform and reflect a vision of reality or the supernatural that may affect the way people believe and behave. A woman's point of view when looking at art, encourages individuals to: (1) analyze and question the vision of reality that images of women present and (2) question the viewer's own ideas and values on these issues—particularly the construction of gender.[1]

(Find a representation of a woman in Maya sculpture in the Museum. Answer these questions from a woman's viewpoint.)

1. What is your reaction to this sculpture?

_____
_____
_____
_____

2. Describe what you see.

_____
_____

3. What kind of story might you write about this image?

_____
_____

4. What are the visual cues in the sculpture that you used to figure out the meaning?

_____
_____
_____

5. Describe the way the ancient artist depicts women.

_____
_____
_____
_____

6. What does this image tell you about the relationship between women and men or women and women?

_____
_____

[1] This gallery sheet adapted from Barbara F. Suploe, "Gallery Sheet," The Barnes Foundation, 1994 presentation National Art Education Association.

7. Why do you think the artist depicts this woman (women) this way?

8. How would you feel if you were (a woman) depicted this way?

9. Does the woman/women remind you of someone else? If so, why?

10. Do you think this woman (women) is a symbol for all women? why?

11. What were the predominant attitudes about women when this was carved or modeled?

12. How could you change this image to change the meaning you place on it?

Nombre_____Fecha_____

Acercamiento a la escultura
(del punto de vista de la mujer)

Las imagenes artísticas no son neutras. Estas nos aportan información y representan, ya sea la realidad o lo sobrenatural, mismos que pueden influir en la manera como piensa o actua la gente. El punto de vista de la mujer que observa el arte, motiva a la persona a: 1) Analizar y reflexionar sobre la realidad que estas imagenes femeninas representan y, 2) Cuestionar las ideas al respecto y reflexionar sobre la valorización que le otorga el observador a estos temas—sobre todo la formación del género.[1]

(*Localice una representación de una mujer maya dentro del museo. Responda a las siguientes preguntas desde el punto de vista de la mujer.*)

1. ¿Cuál es su reacción frente a esta escultura? _____

2. Describa lo que ve._____

3. ¿Qué clase de historia escribiría Ud. sobre esta imagen?_____

4. ¿Qué señas visuales usó Ud. para interpretar esta escultura?_____

5. Describa como representaban los artistas de la antigüedad a la mujer._____

6. ¿Qué le dice esta imagen sobre la relación entre hombres y mujeres o entre mujeres?

[1]Esta página de la galería fue adaptada de "Gallery Sheet" por Barbara P. Suplee. Barnes Foundation. Presentado a la National Art Education Association en 1994

7. ¿Porqué piensa Ud. que el artista representó a esta(s) mujer(es) así?_____

8. ¿Qué sentiría Ud. si fuese Ud. (una mujer) representada así?

9. Esta(s) mujer(es) le recuerda(n) a alguien? Si es el caso, ¿Porqué? _____

10. ¿Piensa Ud. que esta(s) mujer(es) es (son) simbólica(s) de todas las mujeres? ¿Porqué?

11. ¿Qué actitudes prevalecían respecto a la mujer cuando éstas fueron esculpidas?

12. ¿Cómo podría Ud. alterar esta imagen para cambiar la interpretación que Ud. le ha dado?

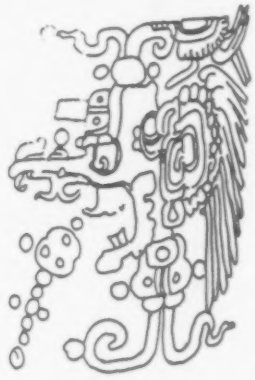
Religion

The religion of the Maya dominated all of life. There was no differentiation between physical and spiritual realms. Everything was alive and everything, including time, possessed supernatural power. They believed the past was always returning and believed it was important to know history in order to know future destiny. The continued well-being of the universe required the active participation of the human community through ritual. The principle aspect of gods was power. Ritual and prayer were a means of bargaining with the gods' power.

Gods and people were interdependent. The destiny of every individual depended upon the ability to incur the favor of the gods and the actions of Otherworld beings influenced the fate of this world. Otherworld beings are also dependent upon the actions of the living for their welfare.

Gods were dualistic in nature; each aspect had different attributes and could deliver both good and bad things. Many had both male and female aspects and aspects for day and night. Gods of the stars and planets each had an underworld aspect since they died daily and traveled beneath the earth before reappearing in the sky.

Upon death, ancestors became supernatural beings. Kings, queens, and shamans could pass into the Otherworld during an ecstatic trance.



Political Organization

The Maya had an integrated system of segmentary states which shared a common language. The languages were Yucatec and Cholan, both of the Maya language family. These states shared common cultural norm, ideology, but were jealous of individual political autonomy. The local authorities duplicated the power of the central authority.

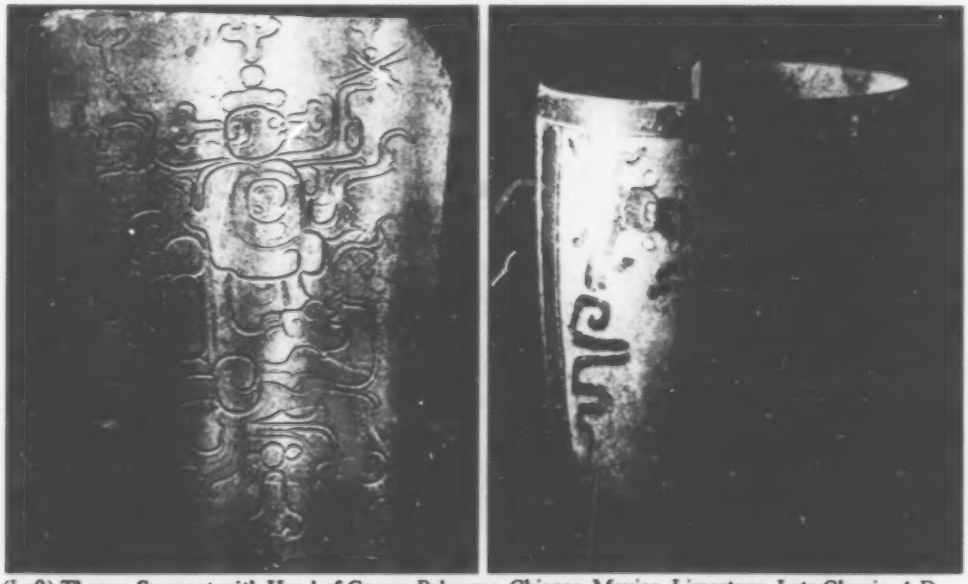
There were interstate linkages with interpolity marriages, gift-giving, trade in status-related goods, ritual movements, ceremonies, and warfare. There was a weak overall economic integration.

Deities as Subjects on Functional Objects

The tablet-shaped sculpture incised with the head of Chaac is one of two known throne supports from the same throne discovered in the Palace at Palenque.[1] Lord Chaac (A.D. 721) was one of the rulers of Palenque. The central motif of this carving is a Bearded Dragon, a god-like being of the underworld. An example of the perfection of relief carving done by Maya artists,[2] this is a very beautifully carved stone. The artist has engraved the stone with some of the most delicate lines, yet balanced them successfully with deeper gracefully carved curves. The matching throne support is in the Museo Nacional de Antropologia, Mexico City.

Thrones or benches are represented on ceramics and in painting and sculptural relief. As symbols of power and hierarchy associated with governmental functions and religious rites, they were placed in architectural spaces where such rituals were performed. This is true of the palace at Palenque, where several thrones were found in interior galleries. These thrones consisted basically of supports and a large rectangular slab. This throne support—and its mate—were found when archaeologists explored the southwest court of the palace. Shaped like a trapezoid, this support has a face resembling a deity on one side. One of the supports still has traces of red paint on it. Because of the reference to "water lily" and the symbol Cauac (storm), the design is associated with the earth monster.[3]

The deity vase has a vertical hieroglyph text on one side which represents the Maya word cimi (death). These beautifully painted bowls were frequently found in Classic period tombs. The feathers on the headdress are painted in alternating colors of black and red.



(Left) **Throne Support with Head of Cauac**. Palenque, Chiapas, Mexico. Limestone. Late Classic, A.D. 721-771. H: 26.5 cm. 1978-70.1. © 1994 photograph courtesy San Diego Museum of Man. San Diego, California. (Right) **Bowl with images of Underworld Supernatural**. M.90.168.17. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California.

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[1] from the late Classic period, Palenque. Jeanne P. Haber Memorial Collection, San Diego Museum of Man. John P. O'Neill, Editor in Chief. *Mexico Splendors of Thirty Centuries*. Boston. A Bulfinch Press Book. 1990. p. 154.

[2] Michael D. Coe. *The Maya*. New York. Praeger. 1971. pp. 105, 112.

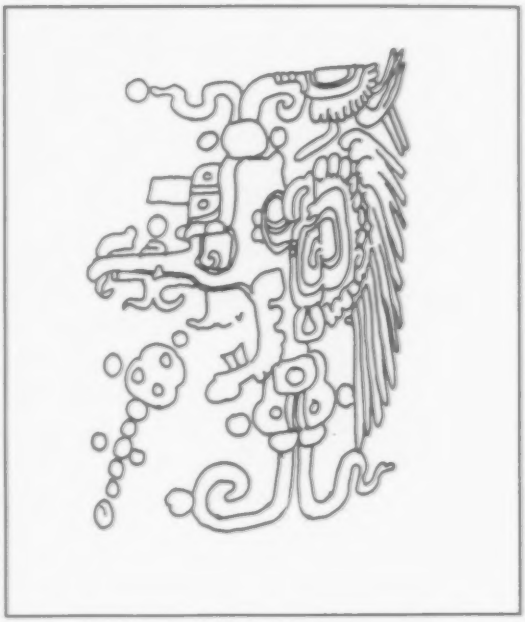
[3] John P. O'Neill, Editor in Chief. *Mexico Splendors of Thirty Centuries*. Boston. A Bulfinch Press Book. 1990. p. 154.

Names _____ Date _____

Characteristics of Maya Deities

With a partner, study the drawings of the two Maya deities below. One was painted on Maya pottery and the other carved on stone. Describe the characteristics that are unique to each deity. Identify the characteristics that are similar. Finish your description on another piece of paper.

A



B

Similar characteristics: _____

_____

_____

_____

_____

_____

Different characteristics: _____

_____

_____

_____

_____

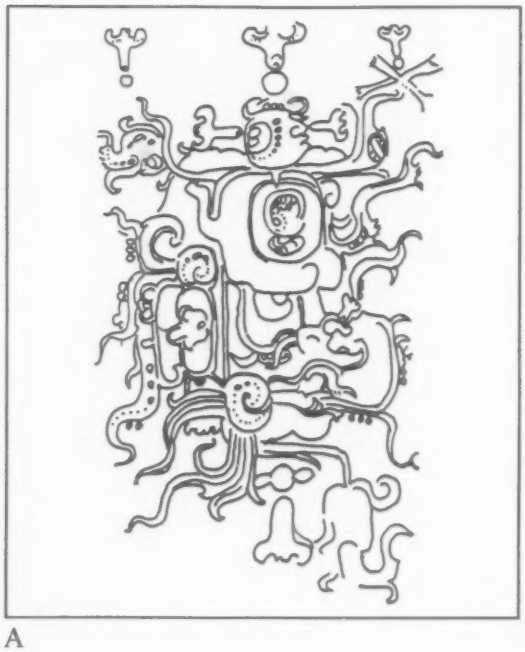
_____

_____

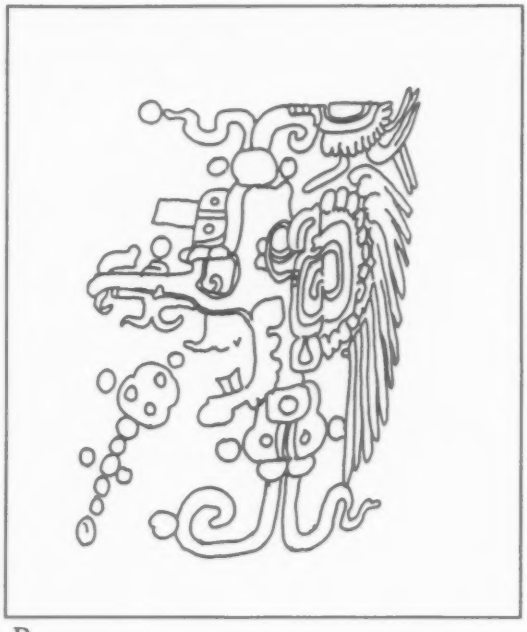
Nombres_____ Fecha_____

Características de los dioses mayas

Examine los siguientes dibujos que representan dioses mayas con un compañero. Uno fue pintado en cerámica maya y el otro fue esculpido en piedra. Describa las características que diferencian a los dos dioses. Anote las similitudes. Use otra hoja de papel para terminar su descripción.



A



B

Características similares:_____

_____

_____

_____

_____

_____

Características diferentes:_____

_____

_____

_____

_____

_____

_____

Name • Nombre _____ Date • Fecha _____

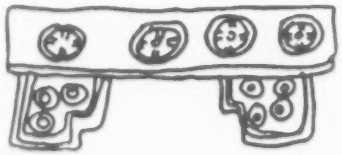
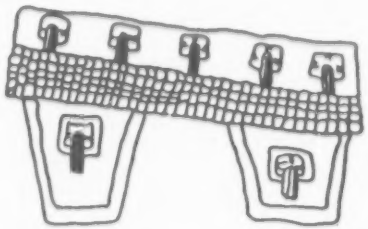
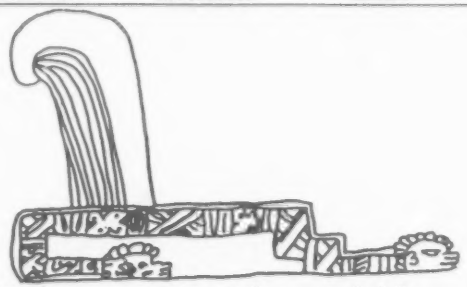
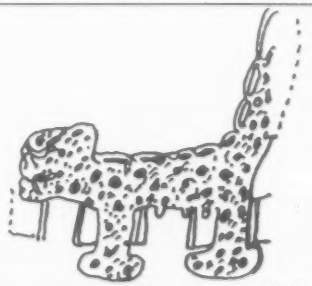
Maya Thrones • Tronos mayas

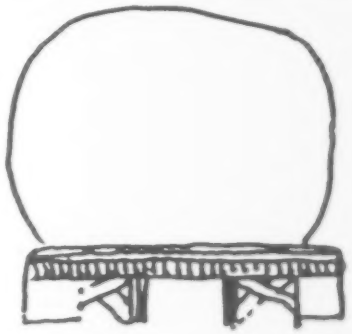
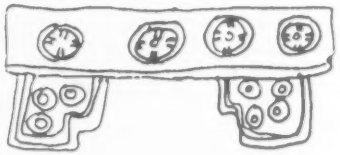
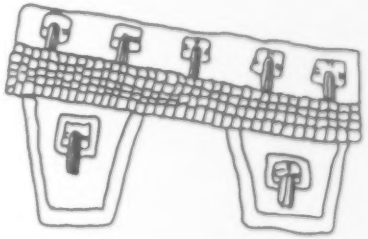
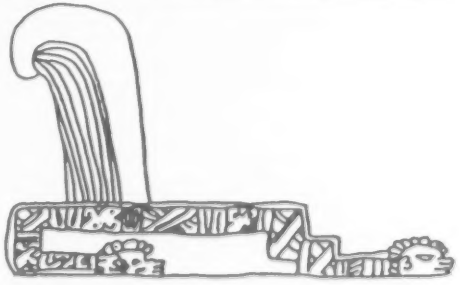
On this page there are many sketches of thrones found in the paintings and carvings of the Maya. In this activity you are to circle the word or words that describe what is different between the sample picture on the left and the two pictures in the same row.

•

En esta página encontrará varios dibujos de tronos encontrados en pinturas y esculturas mayas. En este ejercicio circule la palabra o palabras que describa(n) la diferencia entre el ejemplo a la izquierda y los otros dos dibujos de la misma fila.

Sample Thrones • Ejemplos de tronos

1.	A  direction orientación ornamentation decoracion height alturo width ancho	B  direction orientación ornamentation decoracion height alturo width ancho
2.	A  direction orientación ornamentation decoracion height alturo width ancho	B  direction orientación ornamentation decoracion height alturo width ancho

3. 	A direction orientación ornamentation decoracion height alturo width ancho	B  direction orientación ornamentation decoracion height alturo width ancho
4. 	A direction orientación ornamentation decoracion height alturo width ancho	B direction orientación ornamentation decoracion height alturo width ancho
5.	A direction orientación ornamentation decoracion height alturo width ancho	B  direction orientación ornamentation decoracion height alturo width ancho

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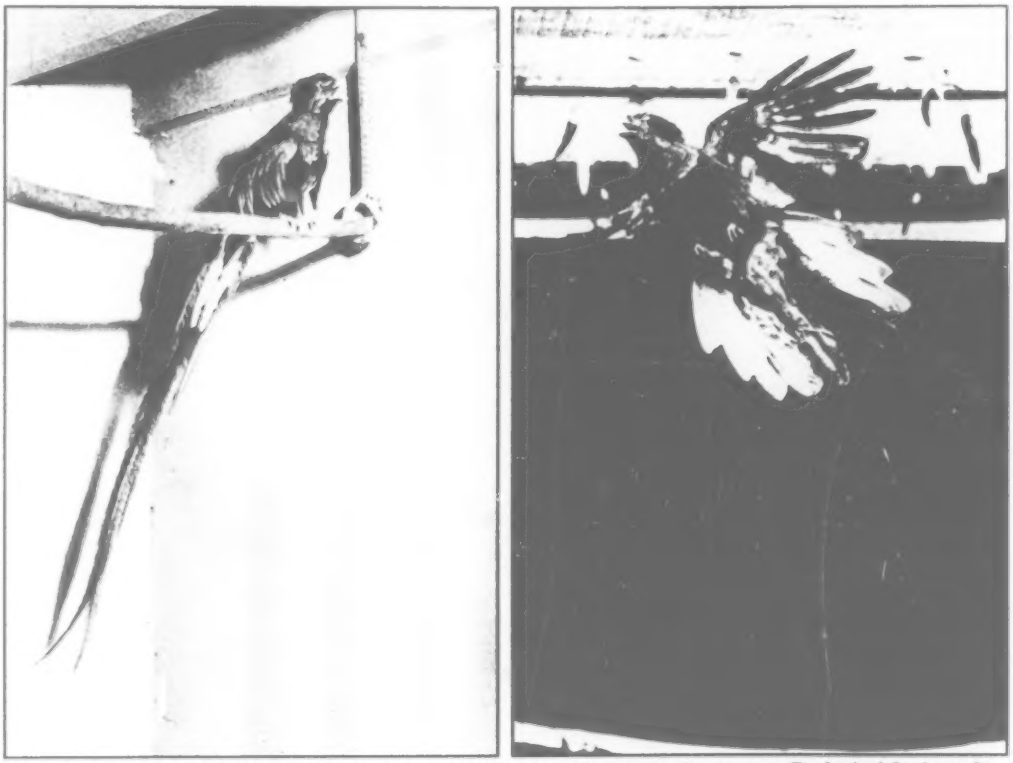
Principal Bird Deity

The principal Bird Deity in Maya Art was used until A.D. 900—then the artists stopped using it in their work.[1] There are three elements symbolizing this important god or goddess: the full figure, wing, and head. You can usually identify this special creature by its long-lipped head and its serpent wing. The serpent wing is a conventionalized bird wing which has its feathers secured to the mouth of a jawless stylized serpent's head, anatomically substituting for the wing's long bones. These characteristics help to mark this bird as supernatural. Therefore it can not be identified as a quetzal bird or parrot.

Mario Dary Quetzal Reserve

One of Guatemala's rarest ecosystems, the tropical cloud forest, can be visited today in Biotopo del Quetzal, a 2,849 acre reserve. Only a small portion is open to visitors. While Quetzals may not be seen between the months of July and February, they are usually visible in the morning hours of the mating season (March-April) and in May and June when they are raising their young. Spider monkeys, toucans, and parrots can also be seen in the lush thick vegetation.[2]



(Left) **Quetzal.** #7255. (Right) **Quetzal in Flight** #7257. © 1994 photographs courtesy Zoological Society of San Diego, California.

[1] Lawrence W. Bardawil. "The Principal Bird Deity in Maya Art," pp. 195-209.
[2] Richard Mahler. Guatemala *A Natural Destination*. Santa Fe, New Mexico: John Muir Publications. 1993. pp. 179-180.

Shamans

The jaguar was lord of the jungle and the night-time personification of Itzamna, the creator, god, lord of life, patron of learning and the sciences. The jaguar appeared in Maya painting and sculpture in transformational positions, coming out of a human's abdomen or with a human coming out of the jaws of a jaguar. Some forms had abdomens marked with the sign for the sun, the symbolic ***k'in***. Sometimes they were painted on drinking vessels used by the ruling elite.[2]

Seated Figure with Jaguar's Head. Veracruz, Mexico. Reddish-buff colored clay. A.D. 600-900. Maremont Collection. © 1994 photograph by Y. Lehmann, courtesy the Israel Museum, Jerusalem, Israel.

Jaguar images appear in art from all of Mesoamerica. Here is an example from the Veracruz area, not likely Maya There is duality between the natural and the stylized in this sculpture. The man in a dignified posture is rendered naturalistically. The jaguar with open jaws and outstretched claws is stylized. Their faces, approximately the same size, one positioned along the same axis as the other, adds order to the incongruous combination. The symmetrical composition does not seem to deviate. This clay figure sits cross legged, his hands firmly placed on his knees. His head is held up and his back is erect. His costume is minimal with a headdress of wrapped coil forms and matching anklets and wristlets made of a few straps.

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[2]Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 17

The Animal Kingdom

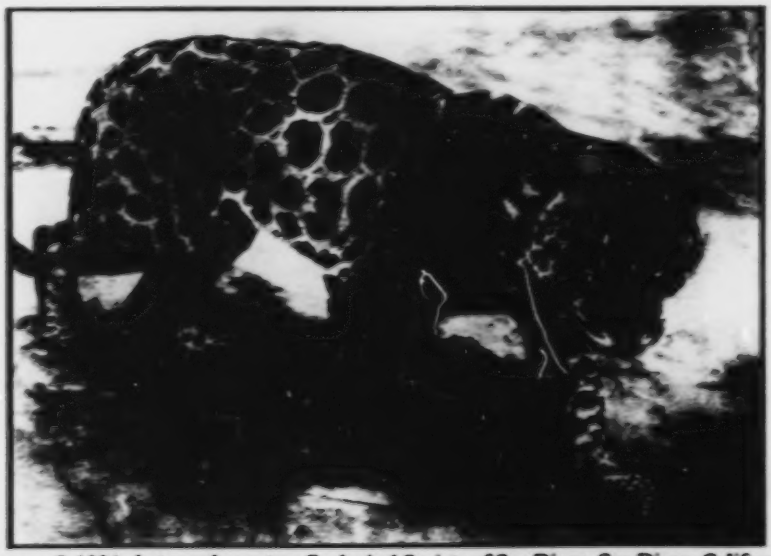
In Maya art and other forms of symbolic expression, several members of the animal kingdom are portrayed in natural and spiritual roles. Sometimes the animals take on human chaacteristics and can think and talk. At other times they become deities. Among those from the animal kingdom represented in this book are jaguars, bats, and snakes.

Jaguar

The jaguar with its yellow fur and dark spots is a distinctive wild animal. It may be represented in Maya art like a clay sculpture, or as a painted image on clay. It may be represented as a baby or an angry adult. But rarely is the jaguar illustrated in its natural habitat. The double-headed baby jaguar is unnatural in its appearance because it has a head at both ends of the oblong clay container. In fact, the jaguar is more likely to be shown in part, as a profile head, or a pelt.

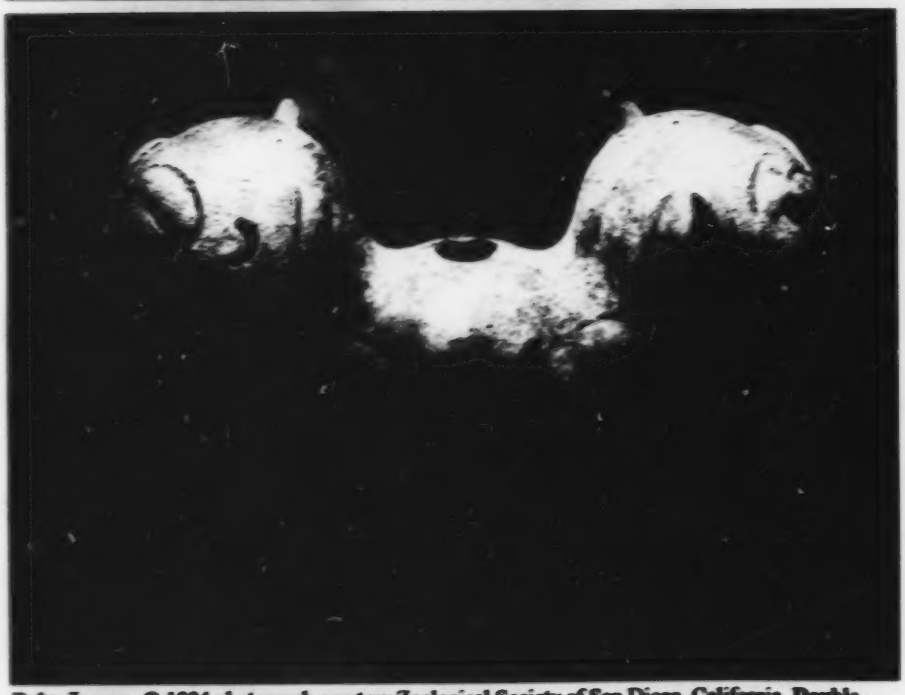
Cockscomb Jaguar Reserve

The world's only jaguar reserve is located near Dangria, Belize. The largest of the hemisphere's cats, the jaguar (*panthera onca*) can weigh as much as 350 pounds and grow to be about 6 feet long. They like to eat armadillos and pacas. The jaguar reserve was established in 1984. The ancient Maya Site Kuchil Balam is located on the reserve. Besides jaguars, there are pumas, jaguarundi, margays and ocelots. The other wildlife includes brocket deer, paca ("gibnut"), peccary, Baird's tapir, and kinkajou ("nightwalker"). The birds on the reserve include toucans, king vultures, curassows, and scarlet macaws.[1]



Jaguar. © 1994 photograph courtesy Zoological Society of San Diego, San Diego, California.

[1] Paul Glassman. *Belize Guide*. Champlain, N.Y.: Passport Press. 1991. pp. 246-247.



Baby Jaguar. © 1994 photograph courtesy Zoological Society of San Diego, California. **Double-headed Baby Jaguar Figure.** A.D. 600-900. M.90. 168.20. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California.

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Jaguar. © 1994 photograph courtesy Zoological Society of San Diego, San Diego, California. Ceramic Polychrome Cylinder Vase with Three Figures in Animal Guise. Campeche (?). Early Classic Period. Red and brown on white and some pink. H: 7 5/8" x Diam.: 4 7/8". F81.109.1. Bowers Museum Foundation Collection. Gift of Mr. Reilly P. Rhodes. © 1994 photograph by Stuart Weiner, courtesy Bowers Museum of Art, Santa Ana, California.

The Jaguar was associated with the supernatural. He was also associated with sacrifices. Sometimes the jaguar holds the decapitated head (*see cover*) or tears open the abdomen of his victim. These sacrificial jaguars usually wear a scarf around their shoulders and wear a water lily blossom on their heads.[1]

The Baby Jaguar

A jaguar baby is the avenger of GIII, the sun, second born of the Ancestral Hero Twins described in the myth in the book *Popol Vuh*.[2]

The double-headed baby clay jaguar figure is especially enjoyable to look at it, not only for its imaginative subject matter (the animal with two heads) but also for the full rounded and cylindrical shapes. The two heads repeat in form, from the view represented here, the rounded central body shape. The smooth finish on the symmetrical clay shape suggests the baby feline's pelt.

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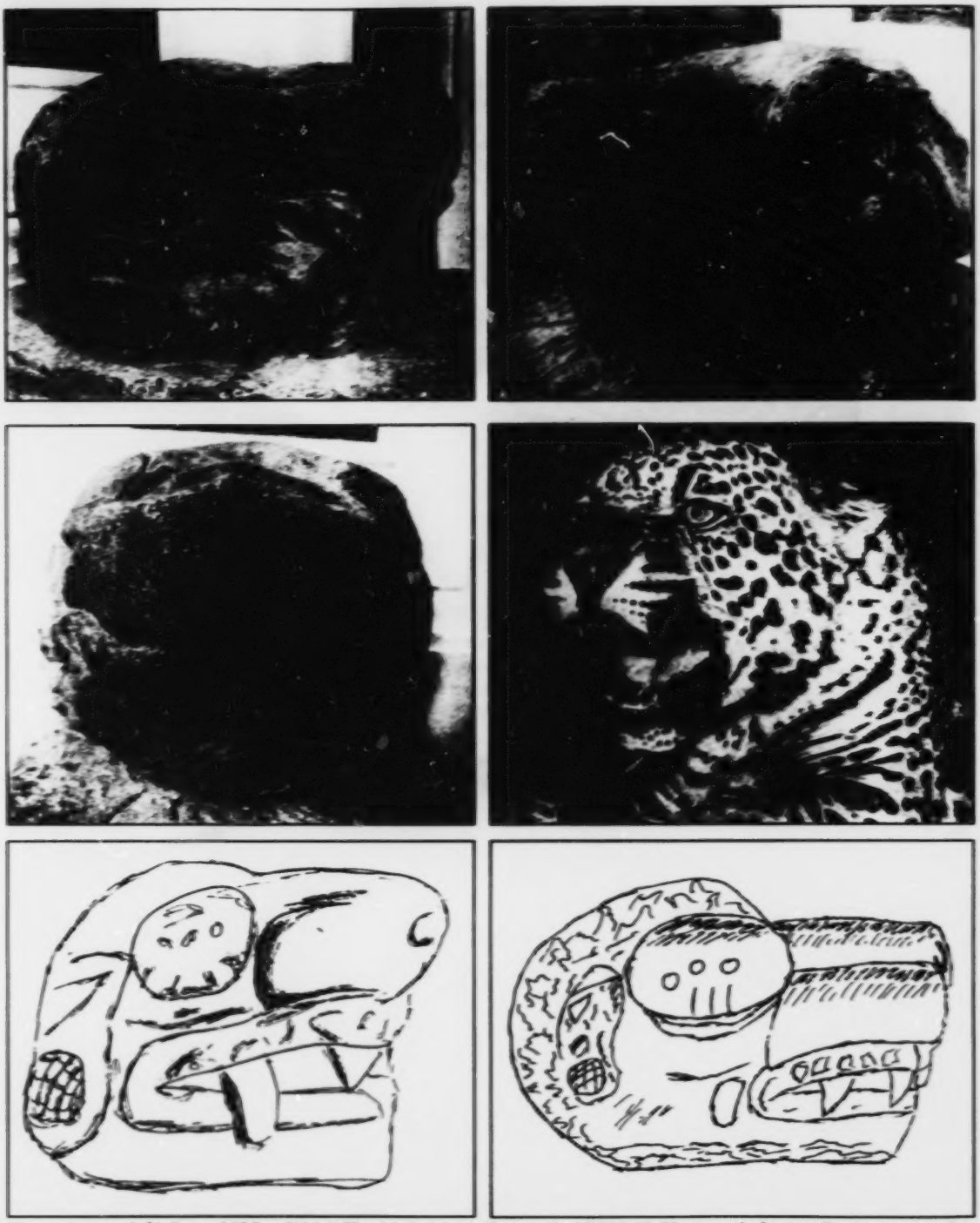
[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 251.

[2] Linda Schele and David Freidel. "The Courts of Creation: Ballcourts, Ballgames, and Portals to the Maya Otherworld." in Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 297.



(Top and center left) **Cast of "Megalithic" Head,"** Quiriguá, Guatemala. NW3# 57. Photographs by Ann Fuerst, courtesy San Diego Museum of Man, San Diego, California. (Right center) **Jaguar. © 1994** photograph courtesy of the Zoological Society of San Diego. (Bottom left) Drawings of cast of "megalithic" head by Sergio Velázquez, age 12, 7th-8th grade, Hilltop Middle School, Sweetwater Union High School District, Chula Vista, California, (Lower right) and Jennifer Heine, Age 11, 7th grade, Bonita Vista Middle School, Sweetwater Union High School District, Chula Vista, California.

Stylized Animal Drawing Activity

Select a realistic photograph of an animal important in the Maya world. Look at it closely. If you were to divide the animal up, what would be the different parts? Make a list. Take each part starting with the animal's face, and draw it, elaborating its features. Try to stylize the animal as the Maya did in their art by using a double line around the features.

Lidded Jaguar Vessel. Maya, Northern Peten, Guatemala. 3rd. century A.D. Earthenware and pigment. H: 9½". 1982.42 a-b. Museum purchase, Wattis Fund, AOA Acquisition Fund, William H. Noble Fund, and C. Barry Randell Fund. © 1994 photograph courtesy The Fine Arts Museums of San Francisco, San Francisco, California.

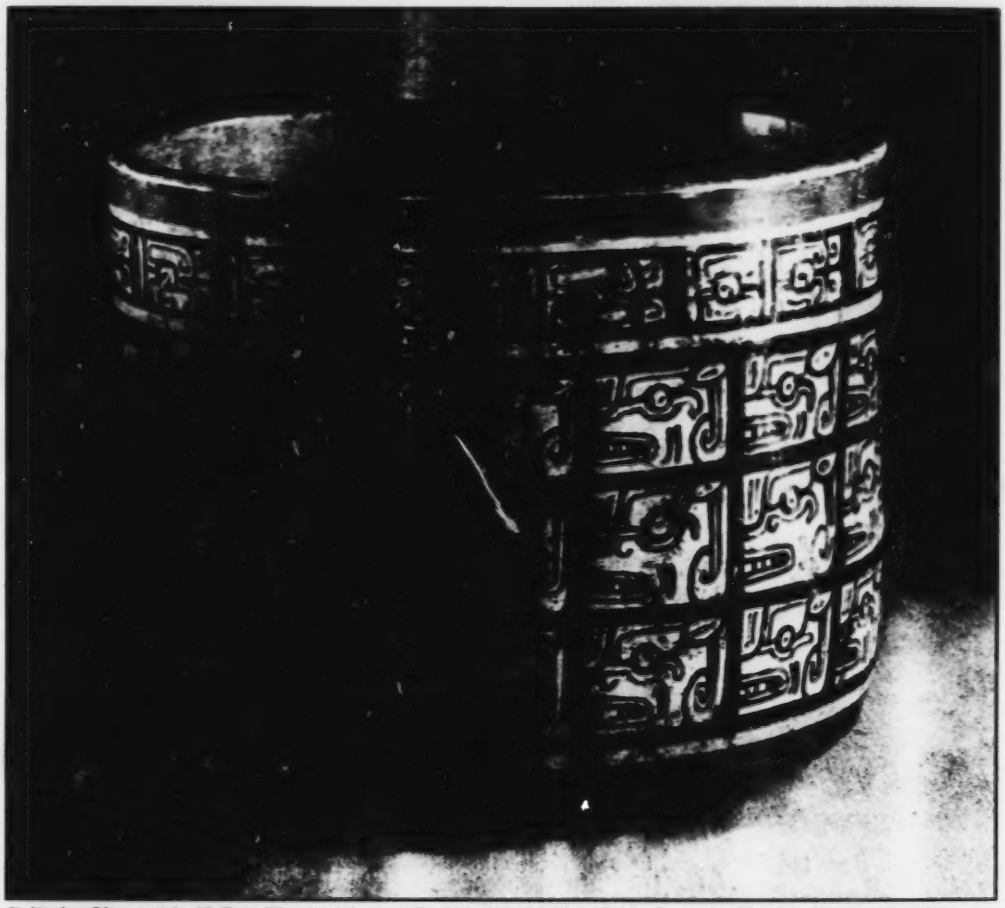
Name • Nombre_____ Date • Fecha_____

Stylized Animal Characteristics Chart
• Cuadro de las características de animales estilizados •

Animals in the Maya World • Animales en el mundo maya	Identify Maya Animal Art Forms • Identifique las formas artísticas de animales de los mayas	Animal Characteristics important to the Maya • Características de animales importantes para los mayas	Special Meanings the Animals have • Significados especiales que tienen los animales
Jaguar • Jaguar			
Bat • Murciélago			
Quetzal • Quetzal			
Snake • Serpiente			

Bats

One supernatural from the underworld is a bat called *Camazotz'*. He is a dangerous creature with deadly fangs. In mythology he tricks the Hero Twins and bites off the head of *Hun Ahpu*. The bat may also represent, as in the Los Angeles cylinder vase, an emblem for a particular social group or town because its head in profile is repeated over and over again in a design field made of rectangular head shapes.[1] Part of the excitement of this vase comes from the contrast in values. Notice how the dark lines contrast dramatically with the light-colored background.



Cylinder Vase with 65 Zotz Heads. Maya. A.D. 500-900. M.90.168.18. Ceramic. H: 6" x Diam.: 7" (15.2 x 17.8 cm.). Gift of the Art Museum Council in Honor of the Museum's 25th Anniversary. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California.

[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 240.

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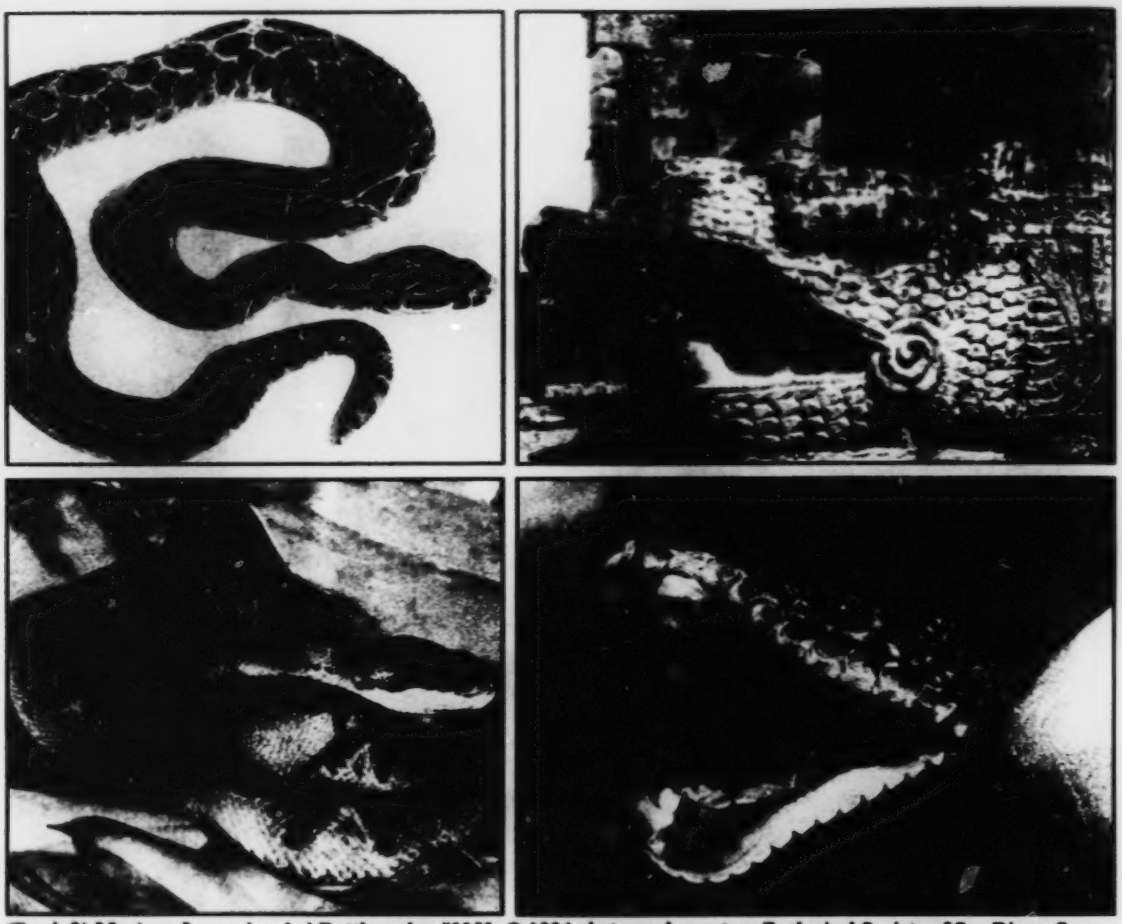
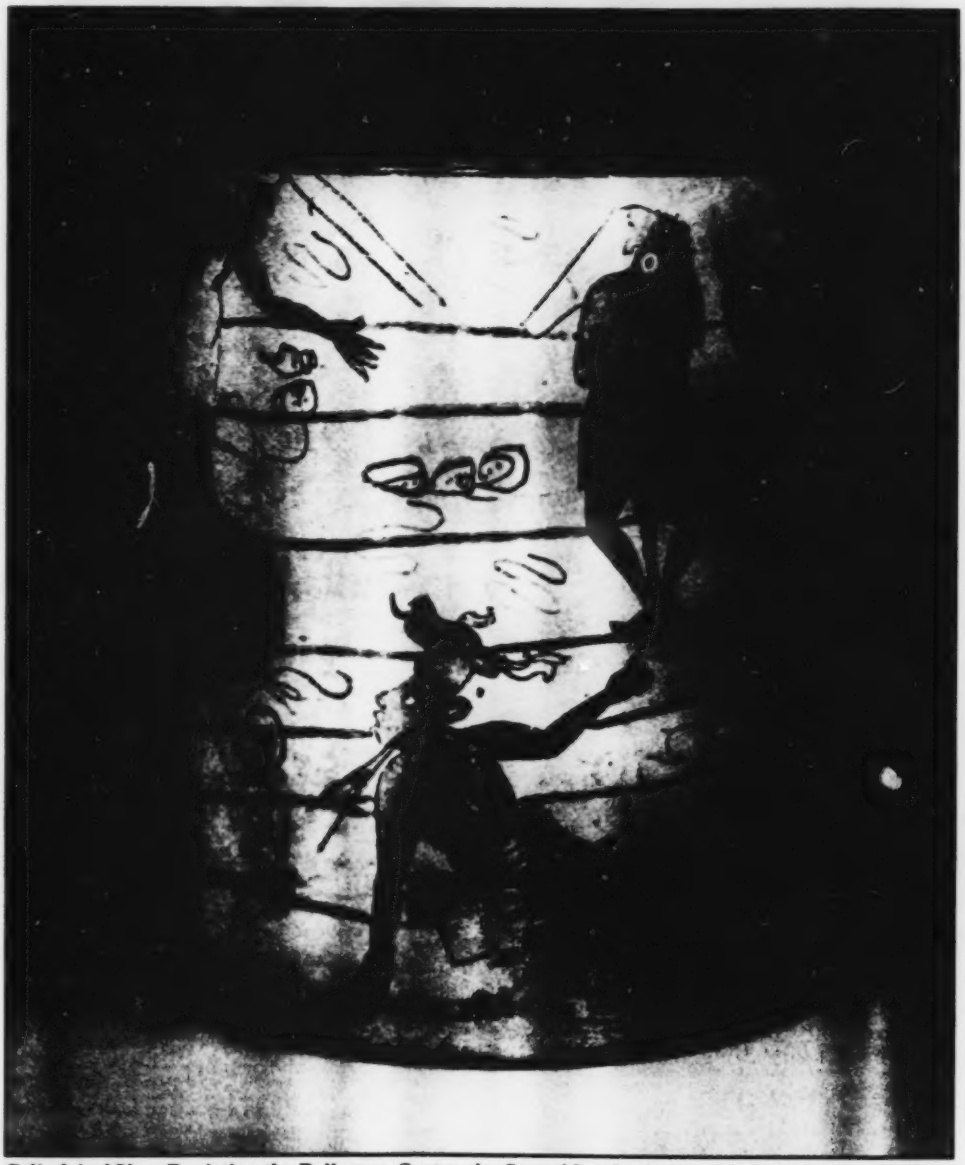


(Top left) **Mexican Lance-headed Rattlesnake. #9353. © 1994 photograph courtesy Zoological Society of San Diego, San Diego, California.** (Top right) **Jaguar Temple (detail).** Chichén Itzá, Yucatan. Stone. Photograph by Theodore A. Willard. © 1994 photograph courtesy the Southwest Museum, Los Angeles, California. (Lower left) **Bushmaster snake. # 68-361-9. © 1994 photograph courtesy Zoological Society of San Diego, San Diego, California.** (Lower right) **Emerald Tree Boa. #86-110-4. © 1994 photograph courtesy Zoological Society of San Diego, San Diego, California.**

Snakes

The snake was very popular with the Maya as terrifying subject matter. At the base of the sculptured columns pictured above, detailed carvings of snake heads, their mouths wide open, dramatically guard the entrance to the temple. South of Chichén Itzá, in Yaxchilán, another sculpture of snakes appears. There, the Vision Serpent is depicted as a rearing snake and symbolizes the path of spirits out of Xibalba when called upon during blood-letting rites. This symbol is found on architectural features around doors in central Yucatan. They are also called Dragon Mouth doors. The double-headed Sky Serpent is a ceremonial bar with a snake's head at each end. It is used in Classic sculpture as a symbol of royalty and divine authority. It demonstrates a king's ability to materialize gods and ancestors. In architecture a "spirit tube" was built between Pacal's tomb to the floor of the Temple of Inscriptions. This serpent-shaped tube allowed him to "speak" to his descendents.

THEMES 3



Cylindrical Vase Depicting the Ballgame. Guatemala, Central Lowlands (possibly Belize). Maya Culture. Late Classic. A.D. 600-900. Orange-slipped earthenware painted in five-color polychrome. H: 23 cm. Dia: 17.5 cm. Ceramic. Gift of Morton D. May. © 1993 photograph by Justin Kerr. Collection of St. Louis Art Museum, St. Louis, Missouri.

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Themes

(While displaying the picture on the other side of this page to students, you may find it helpful to refer to the text and questions on this side of the page.)

Themes refer to the ideas, moods, or symbolic meanings expressed by the work of art. Themes of sacrifice and accession to the throne were popular in Maya art. One story which was painted to represent the theme of sacrifice was the ball game. A theme of accession to the throne might be expressed through the use of the hero twins as subject matter (mythology).[1]

1. Describe the painting on the vase. What do you think supports the idea that this story is about a ballgame?

_____

_____

In the upper portion of the painting, there are people with their mouths open as if they are shouting and arguing. It looks like they are holding musical instruments and noise-makers. Below, a man has fallen in the presence of a large dark ball shape. Dwarves have been identified in Maya art as people wearing long conical shaped headdresses and loin cloths. Do you think the artist intended his spectators to be dwarves? Explain your answer.

_____

2. Who do you think would be sacrificed at the end of a ballgame? Explain your answer.

_____

_____

The losers, wearing deer-head headdresses, will be the ones to be sacrificed in this game.

3. What does the artist do to show controversy?

_____

_____

_____

_____

_____

_____

4. Why do you suppose the bystanders are so excited about this game?

_____

_____

_____

[1] Arthur Efland, editor. *Planning a Balanced Comprehensive Art Curriculum*. Second Edition. Columbus, Ohio: State Department of Education. 1992. p. 18.

Cylinder vase: Itzamná and the Hero Twins. Maya Culture, Central Campeche (?), Mexico. c. A.D. 593-830. Earthenware with red, white and black on yellow-cream slip. H: 20 cm. x D: 17 cm. #1988.1169. Gift of Landon T. Clay. © 1994 photograph courtesy, Museum of Fine Arts, Boston, Massachusetts.

Storytelling in Art

One of the favorite stories Maya artists illustrated was a story from the *Popol Vuh.* The scenes on this vase beautifully illustrate a part of this story: the first meeting the Hero Twins had with the Primary Lord of the Underworld. This is a rare depiction of the meeting.[1] In this view an offering is presented in a basket to the Lord *Itzamná.* The Lord, with a huge light-colored eye, lets his toothless mouth fall open as he gestures towards the offering. The base of his low throne is appropriately decorated with serpents. The other side of the vase illustrates the twins sitting cross-legged before the Lord, their arms raised and folded across their chests.

[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, 1994. p. 278.

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The artist who painted this wrap-around story segment used unusual colors: orange on a yellow background. The position of the remarkable and elaborate glyphs suggests the scene takes place in a palace or other architectural space.[1] But when the Maya artist illustrated this story, like other artists of his time, he did not refer to the story in the pictographic writing he used on the rim. The glyphs on the rim told about dedicating the artistic act of painting, recording the pot's contents, and listing some names instead. The text on the rim states this vase was a drinking vessel for tree-fresh cacao pulp.[2]

Materials

empty aluminum can (entire top removed)
orange, yellow, or cream-colored paper to wrap around the can
markers
tape or adhesive
scissors
ruler

Activity

1. Tell a Maya legend.
2. Discuss the legend with the students.
3. Ask students to summarize the story. Show them examples of story illustrations by Maya artists. Have them identify the part of the story that is illustrated.
4. Have the students illustrate their own stories, in the round, using their own themes.

Storytelling Art

- Read several stories (see suggested resource list in this book)
- Pick a story that relates to your theme
- Picture the story in your mind's eye.
- Write down the main points as the story moves along.
- Describe each character, elaborating on dress, hair style, back dress and jewelry.
- Practice telling the story to your neighbors, mirror, brothers and sisters, and classmates.
- Develop some props

5. Have the students illustrate a story about the Maya they have told, or have heard someone else tell. The illustration may be for a page in a book, or for a wrap-around vessel design. The classroom's target language could be used on the rim.

[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 278.
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 356.

Succession Theme: Tablet of the Cross

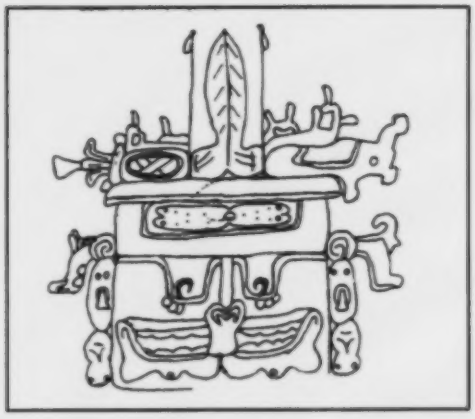
The San Diego Museum of Man has casts of two reliefs showing the dead Lord Pacal with his son. The reliefs are called tablets. Tablet of the Cross has the same name as the temple in which it belonged at Palenque: Temple of the Cross. Pacal and his son Chan Bahlum are carved standing on either side of a cross sprouting from a monster.[1] One scholar believes that the six-foot Lord Pacal is shown short in this relationship because he is dead.[2] The central tree is called a World Tree.

The narrative structure of the hieroglyphic texts on the Tablet of the Cross reveals information about Lord Chan Bahlum. The left text on the central panel has been translated to say: "On 9 Akbal 6 Xul, the many titled Lord, the Jaguar Lord of Palenque, the child of Great Pacal, the child of Lady Ah Po Hel, was displayed on the pyramid. Seventeen kins, 8 uinals and 1 tun later was 13 Ahau 18 Kankin, when the (10th katun) cycle was completed."[3]

On the right, the text in the central panel has been translated as "On 8 Oc 3 Kayab, the Great Sun Lord Chan Bahlum (II) held the sacred bundle of succession. Six kins, 11 uinals and 6 tuns passed from when he held the bundle until the sky event on 2 Cib. The Triad Gods gathered. On the third day the spirit of 6 Sky was born.... The great Sun Lord Chan Bahlum (II), Palenque Jaguar Lord, Ah Po of Palenque, held the bundle (of the bloodletter)."[4]

The 19th century explorer John Stephens describes the subject matter on the tablet, its condition, and the location of its parts when he discovered it:

"The principal subject of this tablet is the cross. It is surmounted by a strange bird, and loaded with indescribable ornaments. The two figures are evidently of important personages. They are well drawn, and in symmetry of proportion are perhaps equal to many that are carved on the walls of the ruined temples in Egypt. Their costume is in a style different from any heretofore given, and the folds would seem to indicate that they were of a soft and pliable texture, like cotton. Both are looking toward the cross, and one seems in the act of making an offering, perhaps of a child."[5]



Mask (Detail of Tablet of the Cross). Drawing by Briana Heine from cast of the original. Age 14, 9th grade, Bonita Vista High School, Sweetwater Union High School District, Chula Vista, California.

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[1] a mountain from which sacred corn grows. The first true maize mountain was not only the place where the gods were born, but it was where humanity was created.
[2] Schuele in George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 493[42]
[3] J. Kathryn Josserand and Nicholas A. Hopkins. *Maya Hieroglyphic Writing*. Tallahassee: Jaguar Tours. 1993. p. 28 and personal communication.
[4] J. Kathryn Josserand and Nicholas A. Hopkins. *Maya Hieroglyphic Writing*. Tallahassee: Jaguar Tours. 1993. p. 28. and personal communication.
[5] John L. Stephens with illustrations by Frederick Catherwood. *Incidents of Travel in Central America, Chiapas and Yucatan*. New York: Dover Publications, Vol. II (Originally published 1841), 1969. p. 346.

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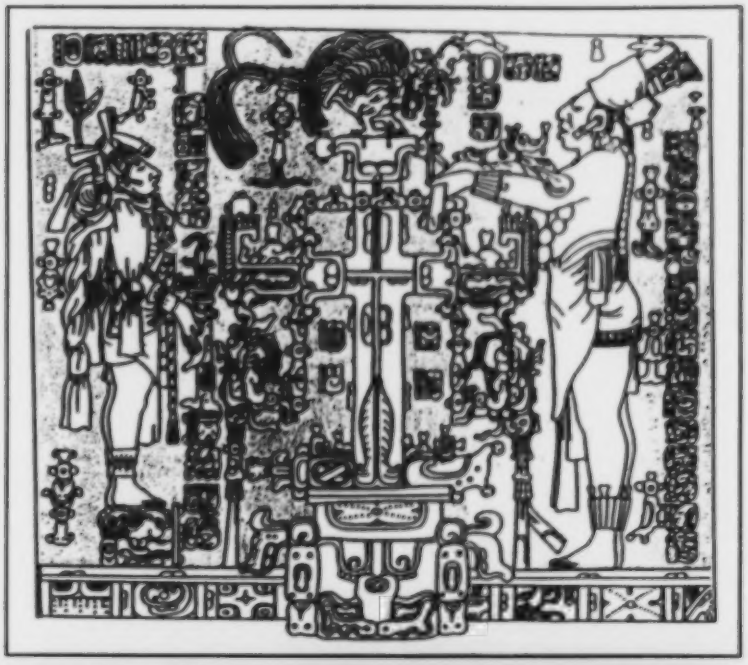

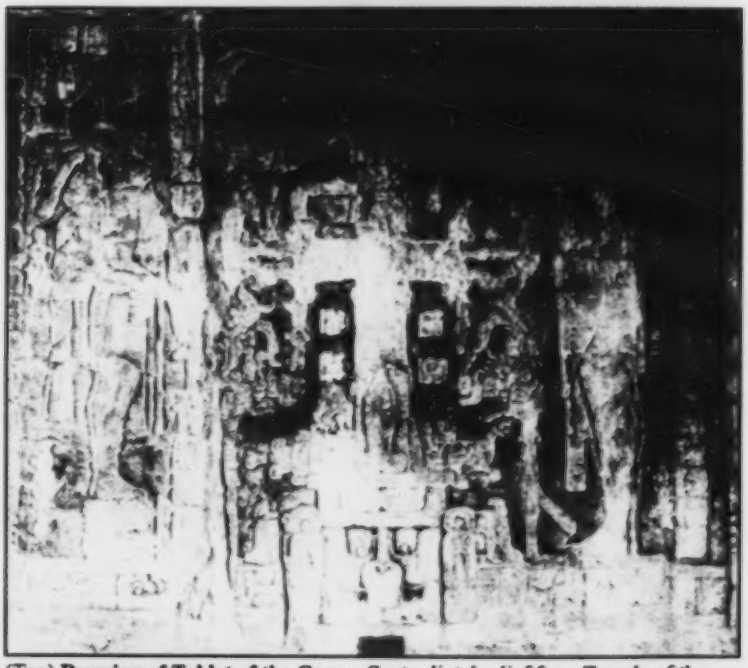

(Top) **Drawing of Tablet of the Cross.** Center lintel relief from Temple of the Cross, Palenque, Chiapas, Mexico. Drawing by Linda Schele. Printed with permission of the artist. (Bottom) **Cast of Tablet of the Cross.** Center lintel relief from Temple of the Cross, Palenque, Chiapas, Mexico. NW# 52. © 1994 photograph by Roland W. Reed, courtesy San Diego Museum of Man, San Diego, California.

Dumbarton Oaks Tablet

This beautiful relief sculpture was created in Palenque after the King Kan-Xul's capture by the people of Toniná, a nearby Maya capital. The date on the relief is the 92nd anniversary (plus 24 days) of the death of King Kan-Xul I. The King's son, as the new King, is the central figure in the composition. The story on this tablet is a supernatural event, not a real one. The actors in this event are called members of the Palenque Triad.[1] But the intent of this scene is to clearly and dramatically document the genealogical claim of the rulers of Palenque to the throne.[2]

Tablet. Stone. Palenque. © 1994 photograph courtesy Dumbarton Oaks Research Library and Collections, Washington, D.C.

[1]Merle Greene Robertson. *Tercera Mesa Redonda de Palenque*. Monterey: Herald Printers. Vol. IV. 1980. p. 67.
[2]Merle Greene Robertson. *Tercera Mesa Redonda de Palenque*. Monterey: Herald Printers. Vol. IV. 1980. p. 68.

In the composition the King looks upwards as if to read the story in glyphs in the upper left. The text records how he was designated the replacement of his father, and his own apotheosis after death. His father and mother are seated facing each other during this performance. The first ritual is described as taking place when Kan-Xul was 12 years old, when his father was still on the throne.[1]

Dancing in the center is King Kan-Xul of Palenque in the costume of a god. He is coming out of the Otherworld as the god Chac-Xib-Chac.[2] He is also the avatar of Venus, the oldest of the two Hero twins, his ancestors. He holds a serpent-handled ax because he represents the executioner of the sun, his younger twin. This is not only a death-sacrificing scene but a scene of rebirth. The Maya book *Popol Vuh* tells us this dance took place on the ballcourt of *Xibalba*.[3] In his right hand he holds the handle of the akbal vase[4] and a snake. The head is considered north, and the right side of the body was east. North and east were honorable directions and positive.[5]

King Kan-Xul's mother and father are Lady Ahpo-Hel and Lord Pacal. His mother, on the left, wears a cape and holds a God K manikin. His father holds a personified tree that looks just like the one on the sides of his sarcophagus.[6] They are ready to give their son the royal symbols of power. The choice the artist made to represent the moment just before he gets these things seems to have a special purpose. "to reinforce the concept that the acceding ruler was legitimized through genealogical claim and that the rites necessary for his confirmation as ruler could and were completed even by those who were dead."[7] It is possible the Maya believed their dead ancestors could influence events in the world of the living.[8] Genealogical continuity is important in the book *Popol Vuh*. We also know ancestral rites were practiced during the Classic period.[9] The Maya concern with genealogy and ancestor worship is certainly evident within this beautiful relief.

Activity

Write and illustrate a story describing how things have been passed on in your family. Has it been clothing, a piece of jewelry, or even a family business?

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[1] Linda Schele and David Freidel. "The Courts of Creation: Ballcourts, Ballgames, and Portals to the Maya Otherworld," in Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 297.
[2] Linda Schele and David Freidel. "The Courts of Creation: Ballcourts, Ballgames, and Portals to the Maya Otherworld," in Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 297.
[3] Linda Schele and David Freidel. "The Courts of Creation: Ballcourts, Ballgames, and Portals to the Maya Otherworld," in Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 308.
[4] Benson, Elizabeth and Gillett G. Griffin, editors. *Maya Iconography*. Princeton University Press, Princeton, New Jersey 1988. p. 308.
[5] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 56.
[6] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 67.
[7] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 68.
[8] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 69.
[9] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 69.

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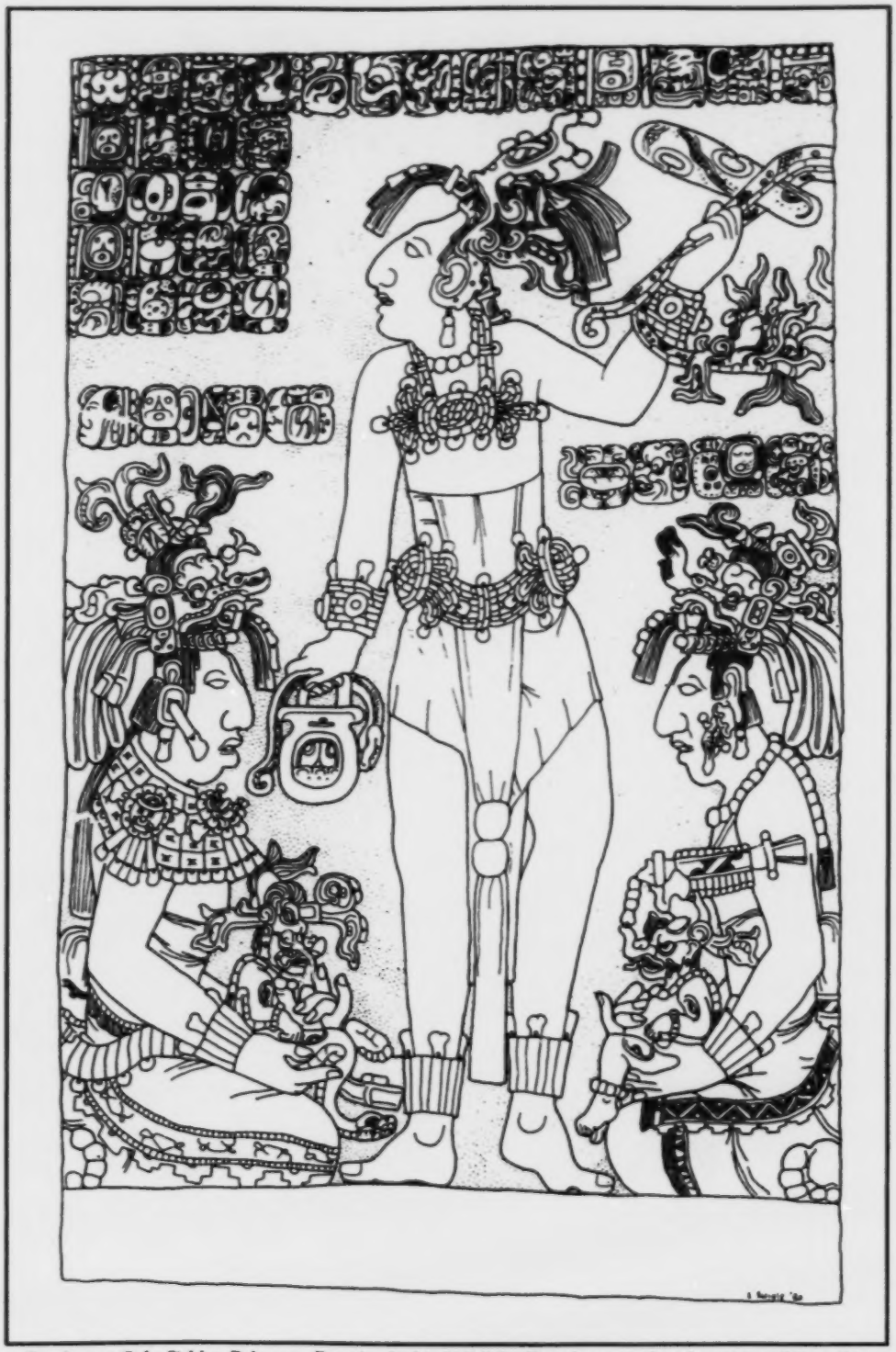


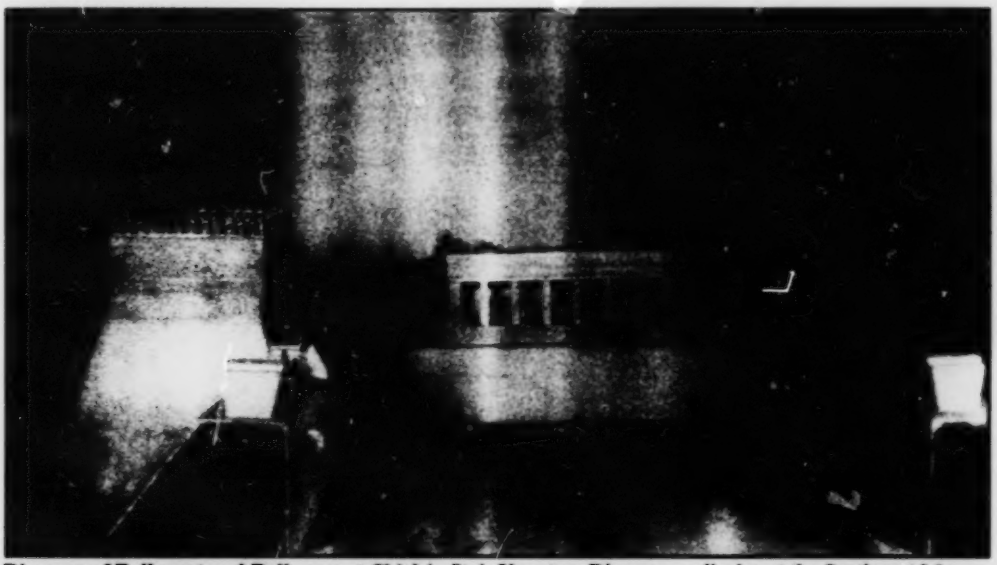
Dumbarton Oaks Tablet. Palenque. Drawing by Linda Schele. Drawing reproduced courtesy of the artist.

Sacrifice, Struggle, and Conflict: The Ballgame

The Maya City was an example of the elite interacting with the cultural and natural events imposed upon it.[1] One of the social, political and religious pursuits of the elite was a rubber-ball game played on a masonry court. It was a very appealing game because it unified the social and ideological fabric of a complex society.[2] The game was played for three reasons: 1) the recreational level of "shallow play," 2) the social status-role level, and 3) the ideational level.[3] The game was sometimes played to ceremonially defeat political enemies. The religious significance of the game was possibly to depict the struggle between night and day, light and darkness, and between the Hero Twins and Lords of Darkness. This was one of themes used by Maya artists.

Ballcourts

At least one ballcourt was found in every city; often several. They were constructed from stone and varied in size. At least one of the Classic sites had courts with two sloped sides and three goals. In post Classic times, particularly at Chichén Itzá, there were inclined bases for two vertical walls.



Diorama of Ballcourt and Ballgame at Chichén Itzá, Yucatan. Diorama on display at the Southwest Museum. P. 1960. © 1994 photograph by Clifford Park Baldwin courtesy of the Southwest Museum, Los Angeles, California.

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[1] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 130.

[2] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 130.

[3] Vernon L. Scarborough, "Courting the Southern Maya Lowlands:A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 143.

Ballcourts may have been built only at major sites where special importance could be given to political and military activities.[1] Instead of war, the victories were determined by the outcome of ballgames. The winners won because they were acting on behalf of supernatural powers. The ball court was so important that enemies rarely destroyed it when they sought to level a previous ruler's accomplishments. "To destroy a court was to challenge the underpinnings of society itself...the ballgame was a sacred institution...."[2] The ball court was very accessible and centrally located in the core of the community. Usually it was visible from elevated surrounding structures.[3] Most ball courts were oriented north-south along a broad medial axis within or between courtyards or acropolis groups.

Chichén Itzá Ballcourts

There are 13 ballcourts at Chichén Itzá.[4] It is the only site to have early post Classic ballcourts in the north.[5] This great number of ballcourts appears to be associated with a unique art style. Instead of hieroglyphs, there are reliefs of players watching a decapitation. The new art style is one example of the Toltec migration and the discontinuity of Maya culture patterns.[6]

The Great Ballcourt at Chichén Itzá was nearly 25 times larger than the next largest ballcourt alleyway in the Lowlands.[7] It is a court with monumental side structures. It also appears to have been an effigy court, a monument to the ballgame institution.[8] On its walls was a cylindrical mercator projection of the path of the planets around the zodiac. The projection is a 14 degree swath 7 degrees above and below the ecliptic along which the planets move—a sort of ballcourt for the gods in which to dribble the planets.[9] Chichén Itzá is the only site in Mesoamerica that boasts a repeated association of ballgame imagery with ballcourts.[10]

One of the characteristics of ballcourts in the north is the appearance of rings.[11] The use of rings[12] attached to the playing wall is consistent with Mexican courts. Some scholars have surmised that the ball in play may have been of a substance more subtle than rubber.[13]

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[1] Eric Taladoire and Benoit Colsenet "Bois Ton Sang, Beaumanoir': The Political and Conflictual Aspects of the Ballgame in the Northern Chiapas Area." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 174.

[2] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 144.

[3] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 138.

[4] Edward B. Kurjack, Ruben Maldonado C., and Merle Green Robertson. "Ballcourts of the Northern Maya Lowlands." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 148.

[5] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 134.

[6] Edward B. Kurjack, Ruben Maldonado C., and Merle Green Robertson. "Ballcourts of the Northern Maya Lowlands "Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 157.

[7] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 137.

[8] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 137.

[9] Peter Tompkins, *Mysteries of the Mexican Pyramids*. New York: Harper & Row Publishers. p. 396.

[10] Marvin Cohodas "Ballgame Imagery of the Maya Lowlands: History and Iconography." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 282.

[11] Edward B. Kurjack, Ruben Maldonado C., and Merle Green Robertson. "Ballcourts of the Northern Maya Lowlands." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 150.

[12] Rings have been found at Uxmal, Cobá and Naranjo (Péten).

[13] Peter Tompkins. *Mysteries of the Mexican Pyramids*. New York: Harper & Row Publishers. p. 396.

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(Left) **Ballcourt Ring.** Chichén Itzá, Yucatan. P. 28377. © 1994 photograph by Theodore A. Willard, courtesy Southwest Museum, Los Angeles, California. (Center) **Ball Player**. Gulf Coast, Mexico. Late Classic period, c. A.D. 900. Hollow, mold-made ceramic. H: 17 cm (6 ¾") W: 7.6 cm (3"). © 1994 photograph courtesy of Glencoe of Macmillan/McGraw-Hill and the Albany Museum of Art, Albany Museum of Art, Albany, Georgia. (Right) **Whistle in Form of Ball Player**. Jaina Island, Campeche, Mexico. Late Classic, A.D. 600-900. Pottery. H: 15.5 cm. x W: 7.7 x D: 4 cm. 1985-33-12. © 1994 photograph by Linda L. Fisk, courtesy San Diego Museum of Man, San Diego, California.

Ball Players

The closest we have to real portraits of Maya ball players are small clay images that function as whistles or ocarinas.[1] These figurines are very generic in nature, unlike the ball players depicted in painted images which depicted the elite in historical acts. The small figurines had an obvious function as musical instruments or noisemakers.[2] When the noisemakers were found in burials, the clay ball player whistles were found with both men and women. Most of the figurines that have come down to us today were found in general household refuse. Perhaps the ball player figurines were souvenirs of teams, or deities that manipulated the ballgames. Because they were molded and mass-produced, it is understandable that they were available to most "middle-class" people.[3]

Ceramic figurines of ball players have been a favorite source of information for scholars to determine what accessories and costumes were worn by Mesoamerican ball players.[4] The ball players used or wore during play and after the game some or all of the following:

Masks: Protective and/or ceremonial masks may have been worn. They may have been small round clay masks.[5]

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[1] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 249.

[2] It is possible the central spectator in the St. Louis Ballplayer vase painting is actually clutching a bird shaped ocarina or whistle to his chest as he discusses the game with another observer. See page 97.

[3] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 249.

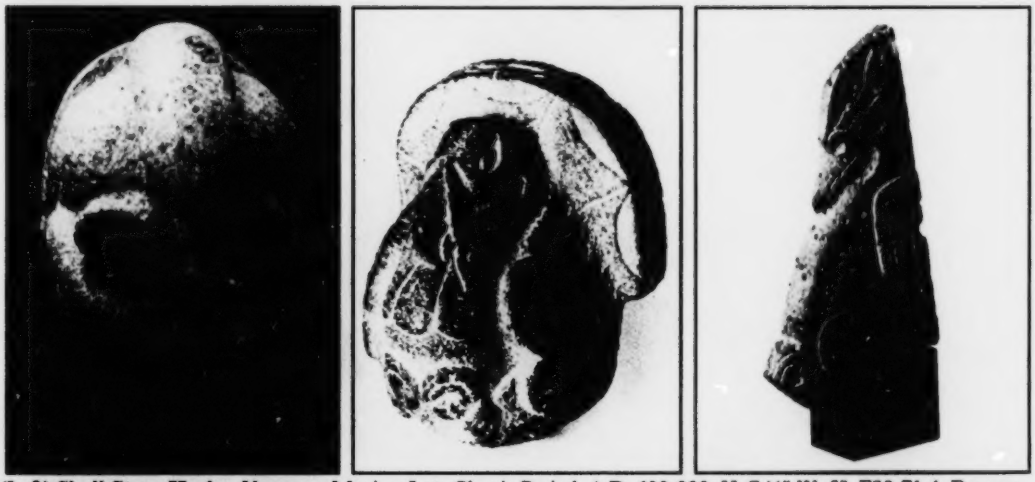
[4] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 243.

[5] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 242.

Belt: Players wore something about their waists. It could be a simple heavy, low belt, or a yoke.

Hachas: This trophy head surrogate usually appeared in the form of a head or a skull. It was also sculptured in the form of a bird. The hacha would be lashed to the yoke opening.[1] As a portable stone accessory, the stone hacha may have been worn only during post-game sacrificial ceremonies. Hachas have been found in burials. They may represent emblems of a team or lineage, or they may have functioned as ballcourt markers.

Palmas: The palma was a fertility symbol.[2] It was worn frontally on the yoke of a ball player. The notch on the bottom was used to attach the stone palma to the padded belt that protected the waist. Hachas and palmas lacking these notches may have been placed against the walls of the ballcourt, functioning as standards or as markers for scoring.



(Left) **Skull Stone Hacha**. Veracruz, Mexico. Late Classic Period. A.D. 600-900. H: 7 ½" W: 5". F80-71.4. Bowers Museum Foundation Collection. Anonymous gift. ©1994 photograph courtesy Bowers Museum of Art, Santa Ana, California. (Center) **Turkey Hacha**. Vera Cruz, Totonac. Stone. A.D. 500-1000 . H: 6 $^{1}/_{8}$" x W: 5$^{5}/_{8}$" x D: 4$^{5}/_{8}$". Terracotta. 1942.3. © 1994 photograph courtesy Worcester Art Museum, Worcester, Massachusetts. (Right) **Stone Palma in the form of a Bird**. Veracruz, Mexico. A.D. 600-900. H: 16". F82.10.1 Bowers Museum Foundation Collection Memorial Fund Purchase. © 1994 photograph courtesy Bowers Museum of Art, Santa Ana, California.

Yoke: The yoke or "U" shaped objects actually worn around their waists by the players in action were probably made of carved wood or a combination of wicker and leather.[3] As a portable stone accessory, the stone yoke may have been worn only during post-game sacrificial ceremonies.

Knee Guards: The pre-Classic knee guards were shaped like small open yokes and masks.[4]

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[1] Lee A. Parsons. "The Ballgame in the Southern Pacific Coast..." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 205.

[2] Lee A. Parsons. "The Ballgame in the Southern Pacific Coast...". Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 205.

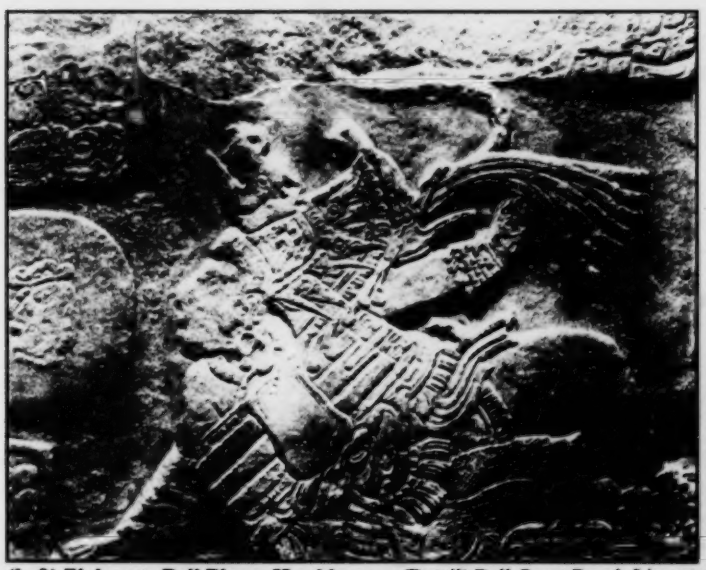
[3] Lee A. Parsons. "The Ballgame in the Southern Pacific Coast...". Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 205.

[4] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 244.

Ball Deflectors: This part of the "uniform" was worn high on the torso. It was shaped like a heavy half-belt and tied over one side, above the hip, on top of one extra small pad.[1]

Arm Wrappings: Arm wrappings were worn on the same side as the deflector. Stone arm bands have been recovered.[2]

Elaborate headdresses: It has been suggested that the costuming of the ball players in Mayan art helps one to identify the winners and losers. The "winners" of the game wore bird costumes and headresses. The winners were the priviliged ones to open the gates to the supernatural world through the sacrifice of their opponents, the "losers."[3] The "losers" are often identified with those wearing a large deer headress.[4] These may have been worn only during post-game sacrificial ceremonies as shown on the Bonampak murals.

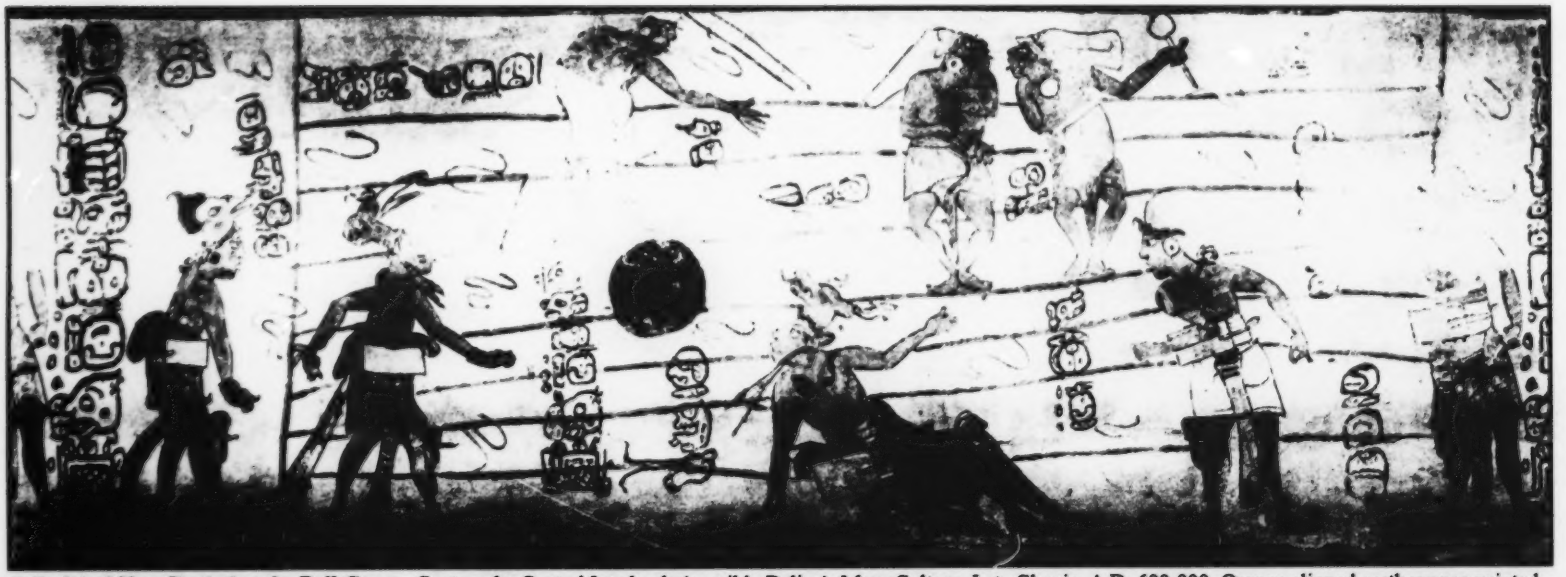


(Left) **Elaborate Ball Player Headdresses.** (Detail) Ball Court Panel. Limestone. Mexican or Guatemalan, Usumacinta River Area, Late Classic Maya Culture. A.D. 650-800. H: 25 cm. W: 63.5 cm. © 1994 photograph by Robert Hashimoto in raking light. Ada Turnbull Hertle Fund, 1965.407. The Art Institute of Chicago, Chicago, Illinois. (Right) **Detail of Cylindrical Vase Depicting the Ball Game.** Guatemala, Central Lowlands (possibly Belize). Maya Culture. Late Classic. A.D. 600-900. Orange-slipped earthenware painted in five-color polychrome. H: 23 cm. Dia: 17.5 cm. Ceramic. ©1993 photograph by Justin Kerr. Gift of Morton D. May, St. Louis Art Museum, St. Louis, Missouri.

[1] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 246.
[2] Susanna M. Ekholm, "Ceramic Figurines and the Mesoamerican Ballgame." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 244, 246.
[3] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 288.
[4] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 268.

Name • Nombre_____ Date • Fecha_____

Ball Players on a Cylindrical Vase Painting
• Jugadores de pelota en una pintura sobre un vaso cilíndrico •



Cylindrical Vase Depicting the Ball Game. Guatemala, Central Lowlands (possibly Belize). Maya Culture. Late Classic. A.D. 600-900. Orange-slipped earthenware painted in five-color polychrome. H: 23 cm. Dia: 17.5 cm. Ceramic. Gift of Morton D. May. © 1993 roll-out photograph by Justin Kerr. St. Louis Art Museum, St. Louis, Missouri.

• **Vaso cilíndrico con una representación del juego de pelota.** Tierras bajas de Guatemala (posiblemente Belice). Cultura maya, fines del período clássico. 600-900 D.C. Pieza de cerámica con barbotina anaranjada pintada con un policromo de cinco colores. Altura: 23 cms. Diámetro: 17.5 cms. Obsequio de Morton D. May. © 1993, fotografía en desplegado tomado por Justin Kerr. St. Louis Art Museum, St. Louis, Missouri.

There are eight figures represented in the painting of a ballgame on a cylindrical vase. There are many glyphs on this vase, some in horizontal rows, more in vertical rows. Three different ground lines are used for these figures. These lines may represent elevations like benches for spectators. The roll-out photograph helps one to view all the activities at one time.

• En la pintura que representa el juego de pelota sobre el vaso, aparecen ocho figuras. Hay muchos glifos en este vaso, algunos en filas horizontales y aún más en filas verticales. Se usaron tres líneas de base diferentes para estas figuras. Estas líneas podrían representar diferentes alturas, como las de una gradería de espectadores. La fotografía desarrollada nos ayuda a ver todas las actividades al mismo tiempo.

1. How many people represented are ball players? • 1. ¿De la gente representada cuántos son jugadores de pelota?

_____

2. Who do you suppose the other figures might be? Explain your answer. • 2. ¿Quiénes cree Ud. que son las otras figuras? Dé sus razones _____

_____

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3. Why do you suppose there are so many glyphs next to the players on this vase? • 3. ¿Porqué cree Ud. que se encuentran tantos glifos junto a los jugadores en este vaso?

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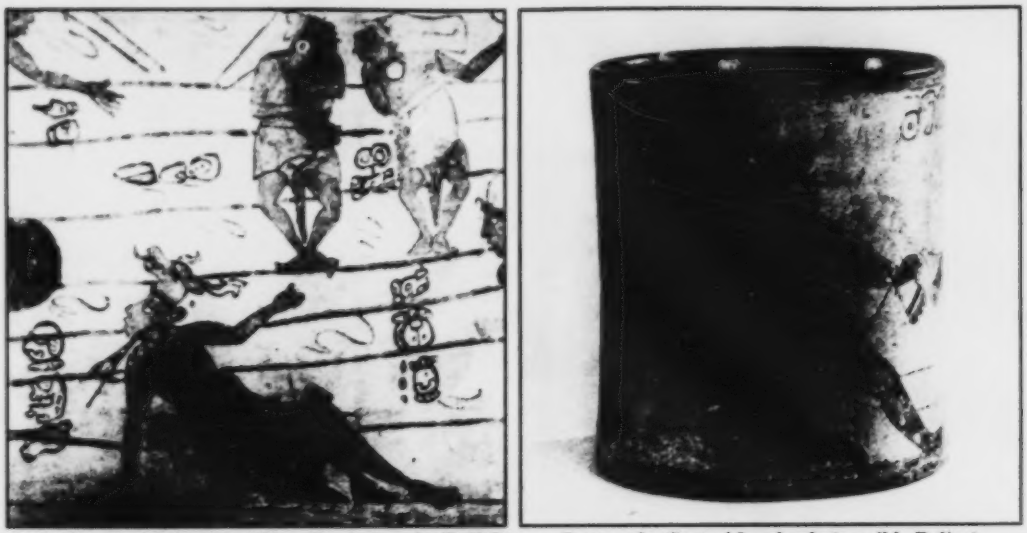


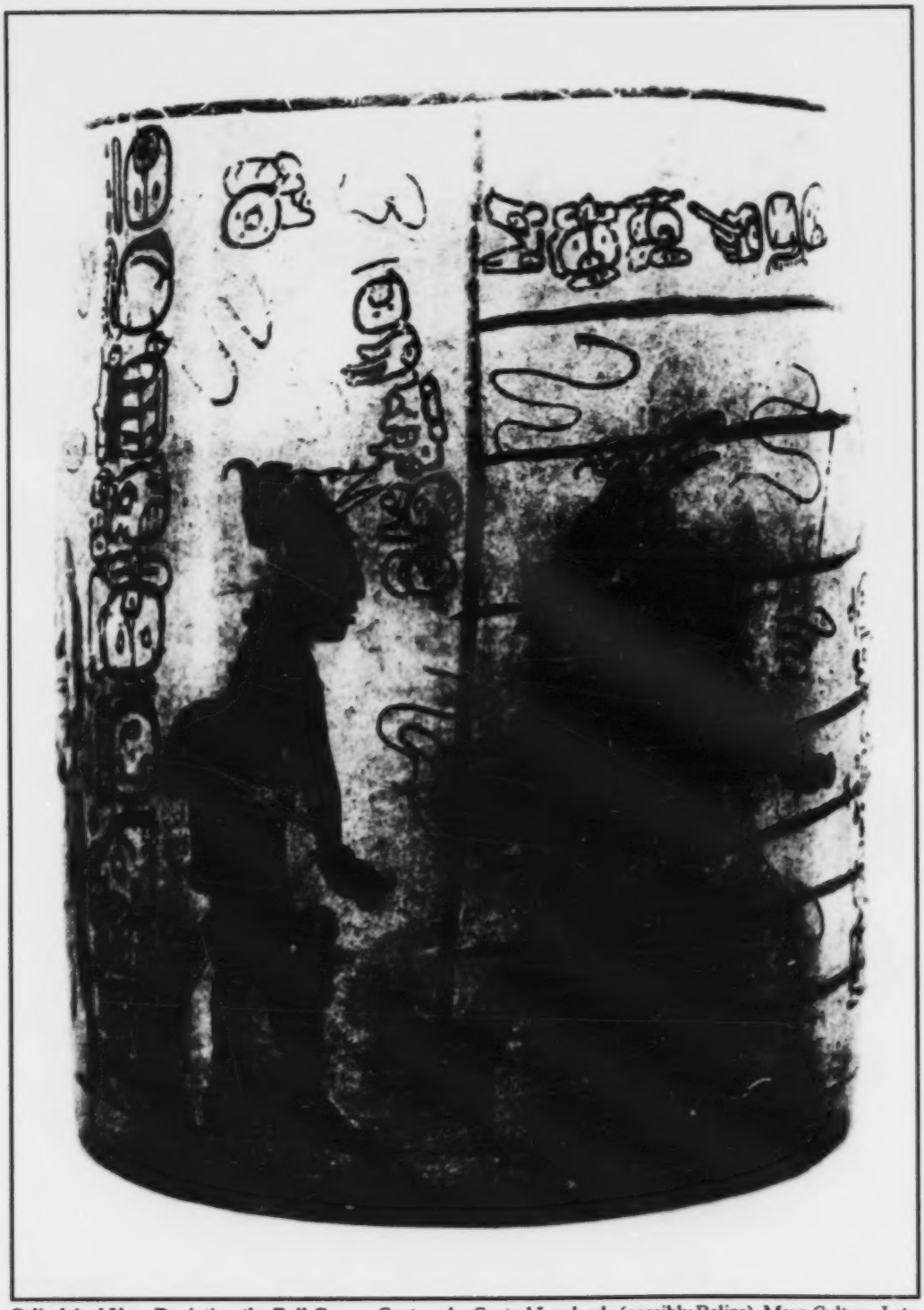
(Left) **Detail of Cylindrical Vase Depicting the Ball Game.** Guatemala, Central Lowlands (possibly Belize). Maya Culture. Late Classic. A.D. 600-900. Orange-slipped earthenware painted in five-color polychrome. H: 23 cm x Diam.: 17.5 cm. Ceramic. Gift of Morton D. May. © 1993 photograph by Justin Kerr. St. Louis Art Museum, St. Louis, Missouri. (Right) **Cylinder Vase with Ball Players**. Yucatan. Late Classic Period, c. A.D. 550-950. Ceramic with orange, red, and black on cream-colored slip. H: 6 ¾" x Diam.: 6". Bowers Museum Foundation Collection. F74.9.2. © 1994 photograph courtesy Bowers Museum of Art, Santa Ana, California.

The Ball Players in Action

The Maya vase painter has several ways of interpreting the action of the ball player. In the examples above, the players are shown dropping down upon their left knees and, in one case, resting on the left arm. The viewer is aware of unbalance or tension. Additionally, the diagonal formed by the outstretched right leg and other shapes adds drama to the composition.

Have students find pictures of modern day ball games and players in action. Two infielders and a pitcher of Latin American heritage are pictured below. These San Diego Padres Baseball players are just a few of the men who have excelled in the sport of a ball game to be recognized as professionals. How do the uniforms of these players differ from those of the Maya players? How do the games they play differ? Are there any similarities between these players and their pre-Columbian ancestors? Have students explain their answers.

San Diego Padres (Left) Ricky Gutierrez, Infielder. (Center) Pedro Martinez, Pitcher. (Right) Luis Lopez, Infielder. All photos courtesy of San Diego Padres.



Cylindrical Vase Depicting the Ball Game. Guatemala, Central Lowlands (possibly Belize). Maya Culture. Late Classic. A.D. 600-900. Orange-slipped earthenware painted in five-color polychrome. H: 23 cm. x Diam: 17.5 cm. Ceramic. Gift of Morton D. May. © 1993 photograph courtesy St. Louis Art Museum, St. Louis, Missouri.

MEDIA 4

Corbelling. Ruins of Vaulted Chambers at Palenque. © 1994 photograph by Bernard Lueck, courtesy Heritage of Americas Museum, El Cajon, California.

Media

(While displaying the picture on the other side of this page to students, you may find it helpful to refer to the text and questions on this side of the page.)

Media refers to physical materials, such as clay, stone, cotton, and paint used to give a work of art its material form. This term media also refers to the processes, such as corbeling, back strap, relief carving, and coil, by which these materials are given form. The transformation of a material into a medium of expression characterizes an artist's struggle. Materials per se are merely physical substances, but when the artist exploits their visual qualities to express an idea, theme, or feeling, they become media, that is, means through which the artist's ideas are realized.[1]

1. What do you suppose is represented in this photograph of something architectural?

_____

_____

Pictured here are ruins of two rooms, seen from the side, at Palenque. Their end walls no longer exist. The tops of the rooms are tapered in a vault shape.

2. How did the artist use small stones and mortar to vault enough space to make a ceiling for rooms?

_____

_____

_____

_____

The Maya vault was based upon the downward thrust of a load upon over-stepping stones. In reality, however, the typical Maya vault for roofing a room was monolithic in character because so much cement was used. This mortar was very resistant to the tropical conditions of heavy rainfall familiar to the Maya. Stability then, is due to stones being held together by the filling of mortar. Also, the center of gravity for each half of the typical vault falls within the limits of the supporting walls. Usually the Maya vaults were narrower, by several inches, than the width of a room. It is believed this happened because the vaults were built over a wooden form. The Maya may have used wooden frames to build their walls until the mortar set. Wooden struts have been found.[2]

3. In this picture you are looking at a cross-section of a building. What do you suppose the construction was like for a passageway between these two chambers?

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_____

_____

_____

[1] Arthur Efland, editor. *Planning a Balanced Comprehensive Art Curriculum*. Second Edition. Columbus, Ohio: State Department of Education. 1992. p. 19.
[2] Herbert J. Spinden. *A Study of Maya Art*. New York: Dover Publications, Inc. 1975. p. 109.

Gallery Clay Reproductions

Copying the art of the Maya in clay was a great experience for the young people pictured here. About eight students were working in clay at one time in the Maya section of the San Diego Museum of Man. These students, who had strong interests in art, worked independently and creatively after a 15-minute tour giving an introduction to the collection and a 30-minute drawing activity.

Students Working in Clay in the San Diego Museum of Man. Jennifer and Christopher chose the same Maya clay sculpture of birds to copy. Each student interpreted the birds in his/her own way. They had only their fingers as tools for this activity. (Top left/right) Jennifer Heine, Age 11. 7th Grade. Bonita Vista Middle School, Sweetwater Union High School District, Chula Vista, California. (Bottom left) Christopher Suber, age 8, 4th grade. Karl H. Kellogg School, Chula Vista and (Bottom right) David Dapeer, age 10, 5th grade, Avocado School, Cajon Valley Union School District. David drew parts of this monument cast first, then he made a clay relief of another section of it. All schools are in California.

Materials:

cutting wire, 25 lb. bricks of low-fire red clay (cut into 2 lb. sections), 2 dry paper towels per student (to "dry clean" their hands before going to the restroom), one newspaper section per student, plastic and a box to transport the finished projects back to the school.

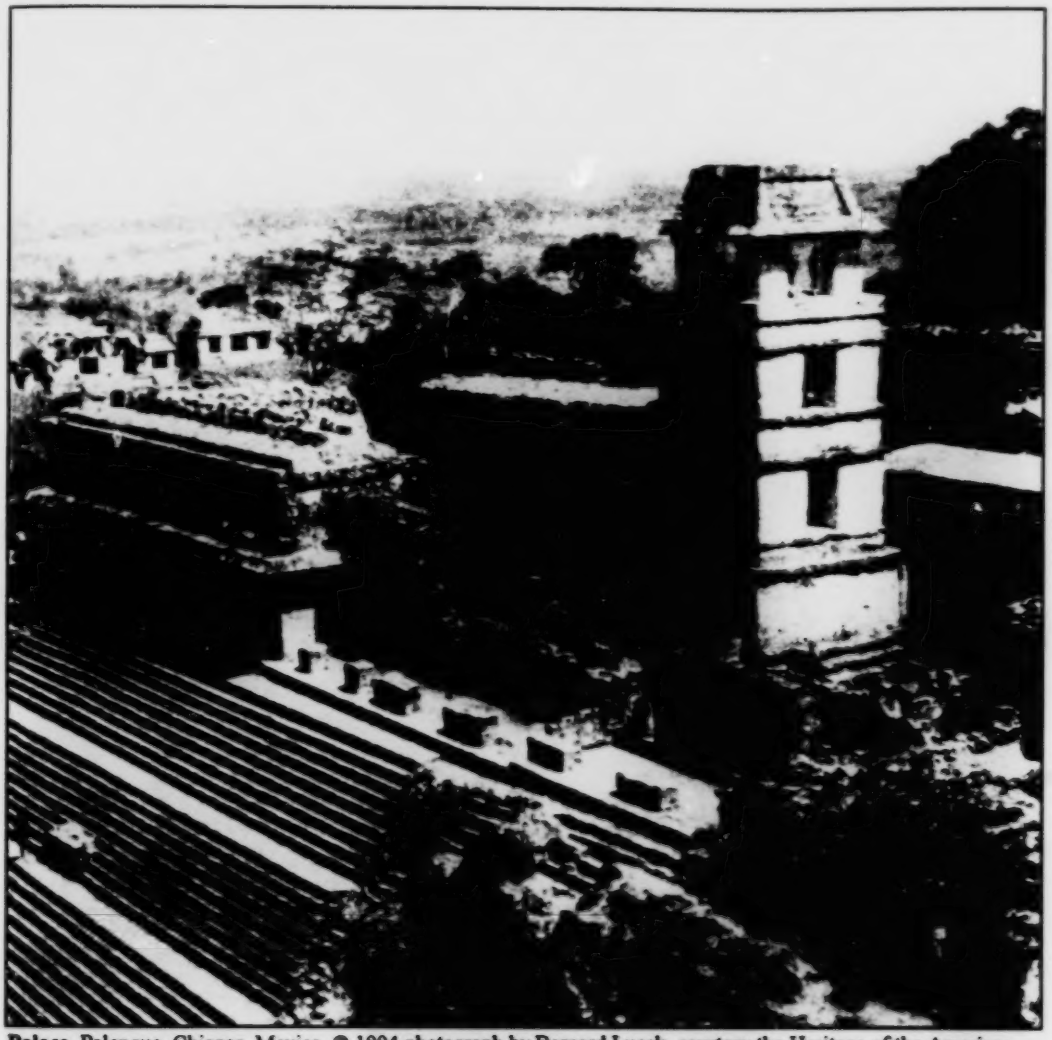
Activity:

1. The students had an opportunity to become familiar with the collection first by tour and by drawing. The students had a 15-minute tour, then spent about thirty minutes drawing in the gallery before receiving the clay. Before the tour, assign the students the problem of copying something in clay that had been sculptured in stone or clay by the Maya.
2. Prepare the materials. Divide up the clay, towels, and newspapers.
3. Students may be creative, not only in their selections, but in how they go about reproducing the things they see. It is possible to let the students work with the clay simply to understand the process and the art work before them. What they make in clay can be photographed, and does not necessarily have to be made with score-and-slip techniques for kiln survival. It is okay to let the students use clay to reflect upon, interpret, and critically assess the characteristics, qualities, processes, and merits of the work of the Maya without preservation of their clay reflections. Use a video camera to develop an electronic portfolio for student assessment later.

Two examples of creative interpretation include the work of students Christopher and Jennifer, who chose a pair of ancient Maya clay birds to copy. Jennifer chose to copy the birds as closely to the original as possible, puffing up the breasts of the birds. Christopher creatively reversed the chests and made them concave. It was a rewarding morning for all.

(Left) To begin her relief, Andrea knelt by the cast monument and flattened the clay on the newspaper. (Center) Sergio worked at a distance to make a copy of the face of the Lord on this cast of a tall stela. (Top right) He captured the look of a prominent nose and protruding lips. Sergio Velázquez, age 12, 7th-8th grade. Hilltop Middle School, Sweetwater Union High School District, Chula Vista, California. (Bottom right) Andrea was impressed with the decorative apron worn by the ruler on this cast of a stela. This is her relief in clay of the apron. Andrea Medina-Smith, age 11, 6th grade. School of Creative and Performing Arts, San Diego Unified, San Diego, California.

Product 5



Palace. Palenque. Chiapas. Mexico. © 1994 photograph by Bernard Lueck, courtesy the Heritage of the Americas Museum, El Cajon, California.

Product

(While displaying the picture on the other side of this page to the students, you may find it helpful to refer to the text and questions on this side of the page.)

Product refers to such works as architecture, stelae, pottery, sculpture in the round, and the like. Discussions of products usually arise when a product in one medium is compared to a product in another like painting compared to sculpture. The term can be used to designate different kinds of architecture.[1] This architecture has been identified as a place for the living, rather than a pyramidal temple designed for religious rites and the dead.

1. What do you think was the purpose of this building?

_____

_____

2. Is there anything that suggests to you this building was designed for the living instead of the dead? Explain your answer.

_____

_____

3. Identify some of the main architectural features of this building.

_____

_____

The Tower at one end of the palace gives the site an identifiable landmark. The entrance to the tower faces north. The base is about 50' deep. When first discovered, vegetation was growing out of the third floor of the tower. To gain nourishment, the trees on top of the tower sent their roots, clinging to the structure, some thirty feet to the ground. Actually, there were four stories with two flights of stairs connecting three corbelled vaulted stories. There is an inaccessible attic which forms a passage between the floors, presummably to lighten the masonry. A Venus glyph painted on one of the stairway landings suggests the tower was possibly used as an observatory, but it could have doubled as a watchtower (see also page 130).[2]

4. If you were living in this building in an environment similiar to what the Maya knew, how would you change the appearance of this building?

_____

_____

_____

_____

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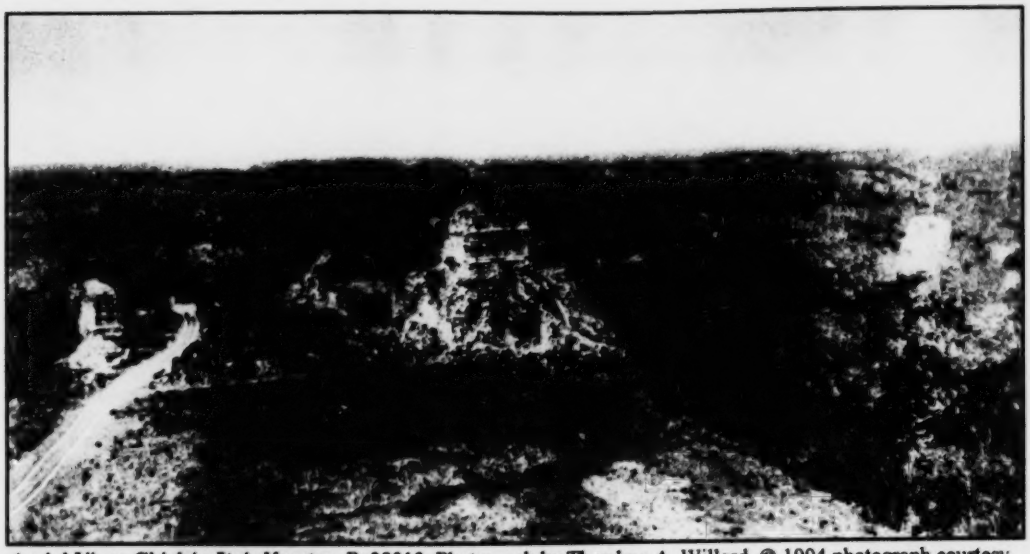
_____

_____

[1] Arthur Efland, editor. *Planning a Balanced Comprehensive Art Curriculum*. Columbus, Ohio: State of Ohio Department of Education. Second Edition. 1992. p. 19.
[2] Michael D. Coe. *The Maya*. New York: Praeger. 1971. p. 102.



Aerial View, Chichén Itzá. Yucatan. P. 28313. Photograph by Theodore A. Willard. © 1994 photograph courtesy Southwest Museum, Los Angeles.

Architecture

The history of Maya architecture is concerned with four things: the stones, the mortar, the support, and the vault. The changes in structure go from block masonry to a concrete core veneered with ashlar slabs, from massive wall structure to slender piers or columns, and from narrow, slot-like chambers to intricate combinations of rooms which give one another mutual support.[1]

Materials: The typical materials include burnt-lime mortar, cement cores, wooden tie rods, and special stereotomic forms, such as boot-shaped stones used in late vaults to help the stability. End walls and cross partitions also played a part. The use of cement or concrete bonding is very typical Maya and not seen in other examples of corbelled vaulting from the Southeastern United States to southern South America.

Techniques: Without close calculation, the Maya architects made their buildings look regular and symmetrical. But when the angles are measured, they are usually off. The symmetry was not rigorous.[2]

Corbelled vault: The Maya vault is formed from cantilevered stones, each placed to overhang the ones immediately underneath. The Maya vault consists of bearing walls, capped by the overhanging vault, which is about the same height as the bearing walls.[3] The enclosed space is from two or more inclined walls. The structure's equilibrium depends upon the adjustment among the unstable overhangs and upon various devices counter-balance.

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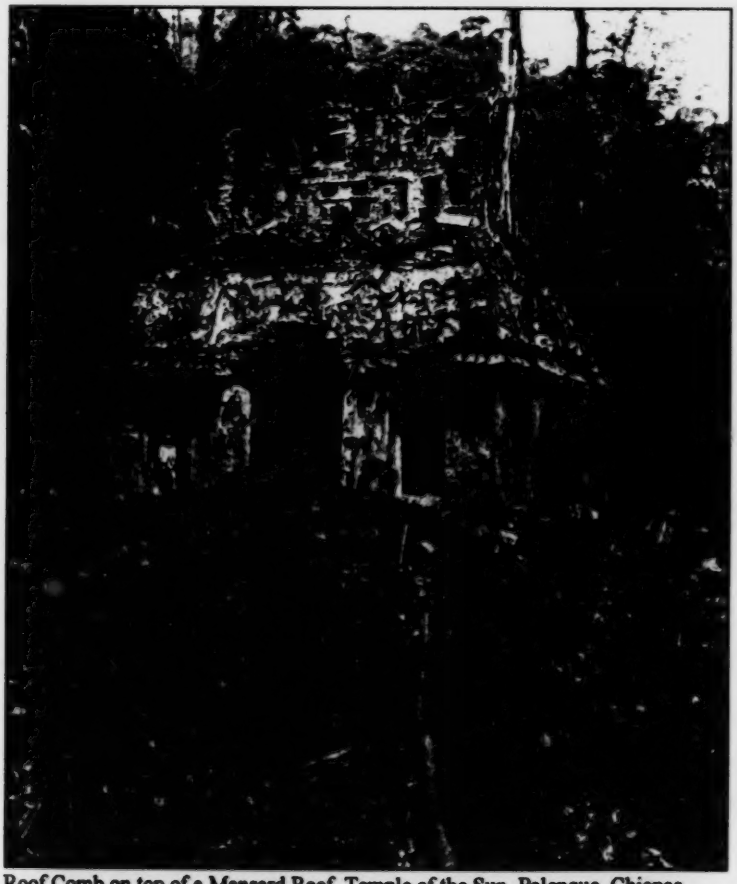
[1]George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 212.
[2]George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 215.
[3]George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 201.

Loads: The central Maya roof decoration, called roof combs, and the north Maya false fronts or flying facades were regarded as loads, and were built to counter-balance the bearing walls against the unstable overhangs. Usually the Maya vault is constructed with thick wooden tie-rods spanning the interior overhangs. They were probably put in during construction to keep the overhangs apart during the long hardening of Maya mortar. They later served as rods from which to hang belongings and the hammocks of the occupants. The stone and mortar buildings were principally for religious use.

Mansard Roof: The aproned roof profile is usually called mansard. The roof usually repeats the chamfered (the horizontal groove or channel in the lower part of each sloping talus) apron profiling of the pyramidal substructure. This type of roof enhances the massive aspect of the building. It is a reminder of the overhanging mat of thatch on individual dwellings.[1] The Temple/pyramids of the Sun, the Foliated Cross, and the Cross at Palenque each have a mansard roof with a roof comb.[2]



Roof Comb on top of a Mansard Roof. Temple of the Sun. Palenque. Chiapas, Mexico. Before A.D. 700. Photograph from Alfred P. Maudsley's nitrate negative # 41994 and film positive, Theodore A. Willard Collection. © 1994 photograph courtesy The Southwest Museum, Los Angeles, California.

[1] George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 214.
[2] Michael D. Coe *The Maya*. New York: Praeger. 1971. p. 103.

Roof Combs: Roof combs were unique to Maya architecture. They served to identify and to mark the importance of certain buildings by a vertical enlargement of the silhouette. At Palenque, latticed roof combs were used.[1]

Chamfer: A chamfer is a horizontal groove or channel in the lower part of each sloping talus component. At Tikal, the chamfer cuts deeply into the base of each of the large aprons of the temple pyramids. Visually, it sets off the sun-lit apron face with shadow. Actually, the chamfer stresses the divisions between terraces and levitates the apron mass.

Chamfer shadow visible next to stairway to pyramid temple. **Temple I. (Giant Jaguar Temple) Tikal, Guatemala.** Before A.D. 800. H: 145'. Photograph from Alfred P. Maudsley's nitrate negative # 41992 and film positive. Theodore A. Willard Collection. © 1994 photograph courtesy The Southwest Museum, Los Angeles, California.

Types of Buildings

Dwellings: Houses of wattle and thatch were preferred because of their good ventilation and easy replacement.[2]

Pyramid: The free-standing pyramid was the dominant form among platform types used by the Maya architects. The oldest pyramid is at Peten, c. A.D. 100.[3] It was a symmetrical construction with the four staircases and the four inset corners. The symmetry and angles were not exact, but very close. This plan is repeated a thousand years later at Chichén Itzá in the Castillo. Each of the four fronts suggests a monumental environment. Every approach looks the same and gives a feeling of symmetry to the neighboring buildings. Other large pyramids display only bilateral or mirror symmetry. The focal point is a central stairway.[4]

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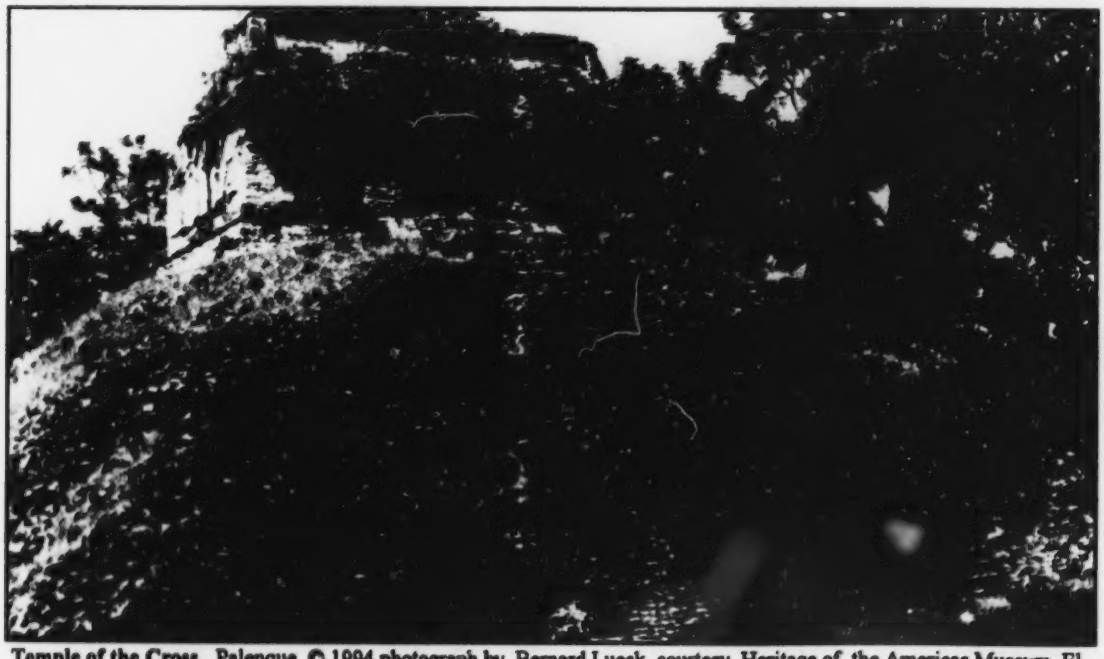
[1] George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 219.
[2] George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 201-202.
[3] George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 207.
[4] George Kubler, *The Art and Architecture of Ancient America*, London: The Penguin Group, 1990. p. 208.

Examples of Maya Architecture

Temple of the Cross

The Temple of the Cross is one of four dynastic temples at Palenque built after the Temple of Inscriptions. It is the most dominant of the temples, in the northern end of the group. Built at the end of the 7th century A.D., the temples of the "Cross Group" have been identified as expressing the structure of the cosmos, the underworld journey of the sun, and the divinity of a new ruler, Jaguar Snake (Chan Bahlum). The Maya artist used this king in a theme of succession when he pictured him on the Tablet of the Cross (see page 101) with his father Lord Pacal, who was buried at the Temple of Inscriptions. Chan Bahlum dedicated the "Cross Group" in A.D. 692. One of the first explorers to find the temple in modern times was John Stephens. A description of his discovery follows:

"This building is fifty feet front, thirty-one feet deep, and has three doorways. The whole front was covered with stuccoed ornaments. The two outer piers contain hieroglyphics; one of the inner piers is fallen, and the other is ornamented with a figure in bas-relief, but faded and ruined.... Within, the chamber is thirteen feet wide and seven feet deep. There was no admission of light except from the door; the sides were without ornament of any kind, and in the back wall, covering the whole width, was the tablet...It was ten feet eight inches wide, six feet four inches in height and consisted of three separate stones. That on the left, facing the spectator is still in its place. The middle one has been removed, and now lies near the bank of the stream."[4]



Temple of the Cross. Palenque. © 1994 photograph by Bernard Lueck, courtesy Heritage of the Americas Museum, El Cajon, California.

[4]John L. Stephens with illustrations by Frederick Catherwood. *Incidents of Travel in Central America, Chiapas and Yucatan.* New York: Dover Publications, Vol. II. (Originally published 1841), 1969. p. 344-345.

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Temple of Inscriptions

Pyramids in Mexico usually were built to serve as the bases for temples, but this large pyramid was erected over the sepulchral chamber of a powerful king.[1] Lord Pacal was buried sometime after August, A.D. 683, in the Temple of Inscriptions at Palenque. An imposing structure, it is a pyramidal platform containing a large vaulted crypt.[2] Because it is set directly into a hill, the topography gives the memorial even more prominence.[3]

This remarkable edifice has a large vaulted crypt at ground level with a pyramidal platform above. A stone tube, called a psychoduct, which began at a notch in the door that sealed the crypt and extended up the stairs to the floor of the temple, was also set in place. Theoretically, it gave the Vision Serpent a path to follow from Pacal's tomb to the space occupied by his living descendants.[4] It took archaeologists three years to reach the crypt within the pyramid because the entrance to the stairway and the stairs were blocked with rubble and dirt (see page 55).

The Temple of Inscriptions. Palenque. Seventh century A.D. © 1994 photograph by Bernard Lueck courtesy Heritage of Americas Museum, El Cajon, California.

[1] Chicki Mallan. *Guide to the Yucatan Peninsula*. Chico, California: Moon Publications. 1987. p. 167.
[2] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 223.
[3] Richard Townsend. *The Ancient Americas: Arts from Sacred Landscapes*. Chicago: Art Institute of Chicago.
[4] Linda Schele and Mary Ellen Miller. *The Blood of Kings*. New York: George Braziller, Inc. 1986. p. 282.

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Maya Revival and Frank Lloyd Wright

It may not be clear where the famous architect Frank Lloyd Wright got his ideas for Maya architecture, but as a child he longed to see ancient ruins. He is quoted as having said: "I remember how, as a boy, primitive American architecture—Toltec, Aztec, Mayan, Inca—stirred my wonder, excited my wishful admiration. I wished I might have money someday to go to Mexico, Guatemala and Peru to join in excavating those long slumbering remains of lost cultures."[1]

Wright launched his career in architecture in the firm of Adler and Sulivan in 1887 when he was only 19. Since the firm dealt mostly with commercial projects, he was given residential assignments. Earlier, in 1884-85, Wright designed a house for a man in New York[2] who paid a photographer's expenses to take pictures of Maya ruins. Wright also visited the 1893 Worlds' Columbian Exposition in Chicago where an architect named Thompson had dramatically displayed reconstructions of Maya ruins and artifacts. In 1914 he began designing the Barnsdall (Hollyhock) House and theatrical community on 36 acres in Los Angeles. When Wright built in the Maya style he was looking for something regionally appropriate to Southern California and the most mass he could get, a "sculptural weight, a monumentality even more dense and earth pressing than he had achieved before..."[3]

Maya Revival Architecture and Architects

Aztec Hotel, Monrovia, CA
Aztec Theatre, Eagle Pass, TX
Aztec Theatre, San Antonio, TX
Aztec Temple El Sol, Glendale, CA
Cordova Hotel, Los Angeles, CA
Federal Building, Balboa Park, San Diego, CA
Fisher Theatre, Detroit, MI
S.H. Kress and Co., New York City, NY
Mayan Theater, Denver, CO
Mayan Theater, Los Angeles, CA
Pan-American Union Building, Washington, D.C.
Part-Time High School, Los Angeles, CA
Philosophical Research Center, Los Angeles, CA
Southwest Museum, Los Angeles, CA (tunnel and annex)
Tikal Pyramid, Disney's Epcot Center, FL
Tulane University, New Orleans, LA (Department of Middle American Research)
University of New Mexico, Albuquerque, NM
Whitney Park Club, Los Angeles, CA

•

Cornejo, Francisco
Griffin, Walter Burley
Lovins, Henry
Requa, Richard
Stacy-Judd, Robert B.
Wright, Frank Lloyd

Art Criticism Activity

Study the influences of Maya Architecture on the American architect Frank Lloyd Wright.[4] Select one of the following buildings to write about. Find pictures of Wright's architecture and Maya architecture. Describe the influences of Maya architecture on the structure and decoration of Wright's work when you compare and contrast the two.

• A.D. German Warehouse, Richland Center, Wisconsin,1915 • Aline Barnsdall's House, "Hollyhock House," Los Angeles, 1918-1921 (In massing and proportion, this house derived from Structure 33 at Yaxchilán) • Tazaemon Yamamura House in Ashiya, Japan, 1918 • The Milliard House, "La Miniatura," 1923, Pasadena • The Samuel Freeman House, 1924, Los Angeles • The Dr. John Storer House, 1923, Los Angeles • The Charles Ennis House, 1924, Los Angeles (near Griffith Park).

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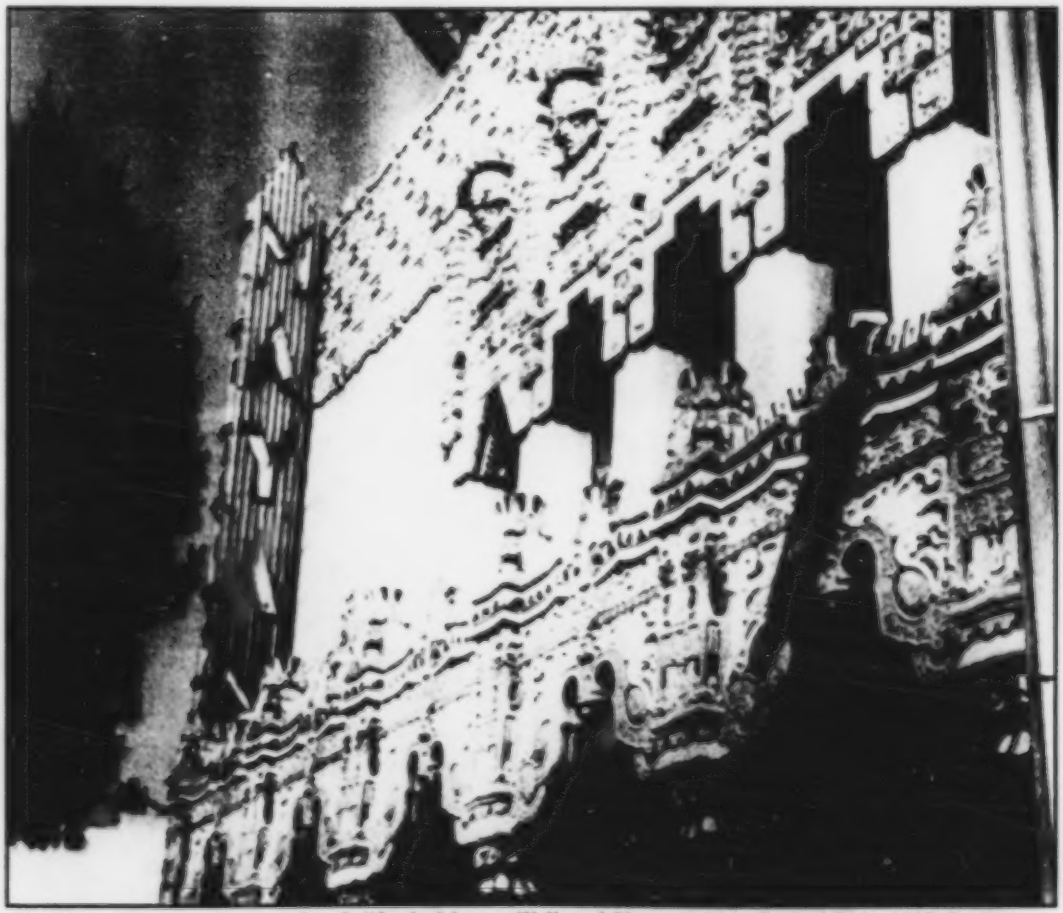
[1] Marjorie I. Ingle. *The Mayan Revival Style.* Albuquerque: University of New Mexico Press, 1984. p.15.
[2] Pierre Lorillard had a house built in Tuxedo Park New York while he was helping to finance Desire Charney's second photographic expedition to Mexico. Marjorie I Ingle. *The Mayan Revival Style.* Albuquerque: University of New Mexico Press, 1984. p.14.
[3] Marjorie I. Ingle. *The Mayan Revival Style.* Albuquerque: University of New Mexico Press, 1984. p.14.
[4] Marjorie I. Ingle. *The Mayan Revival Style.* Albuquerque: University of New Mexico Press, 1984. p.15-19.

The Mayan Theatre, Los Angeles

The Mayan Theatre in Los Angeles opened on August 15, 1927, with a Gershwin musical. Theatres in the revival style had already opened in Texas. There is no particular Maya structure that inspired this building, located in downtown Los Angeles on Hill Street between 10th and 11th streets. The architectural firm of Morgan, Walls and Clements borrowed from many sources.[1] The garish look of the exterior as seen today comes from the work of a theatre usher who spent six weeks in the 1960's painting the reliefs with brilliant household paint, using National Geographic photographs as his reference. On the exterior seven warriors guard the entrance. Once under the overhanging , one looks up at numerous reliefs. The circular decorations surrounding each light fixture suggest Maya or Aztec calendar shapes. This decoration and the lavish decoration inside were created by Francisco Cornejo.

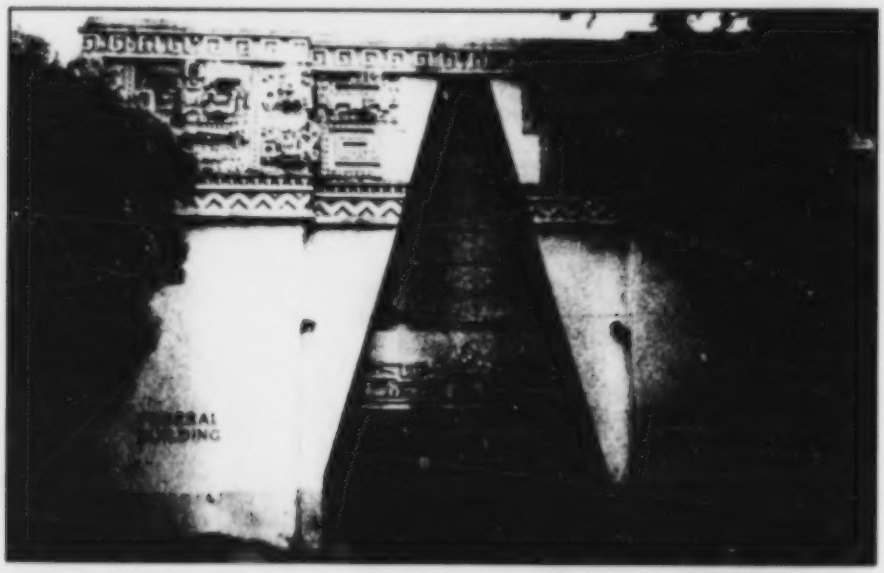


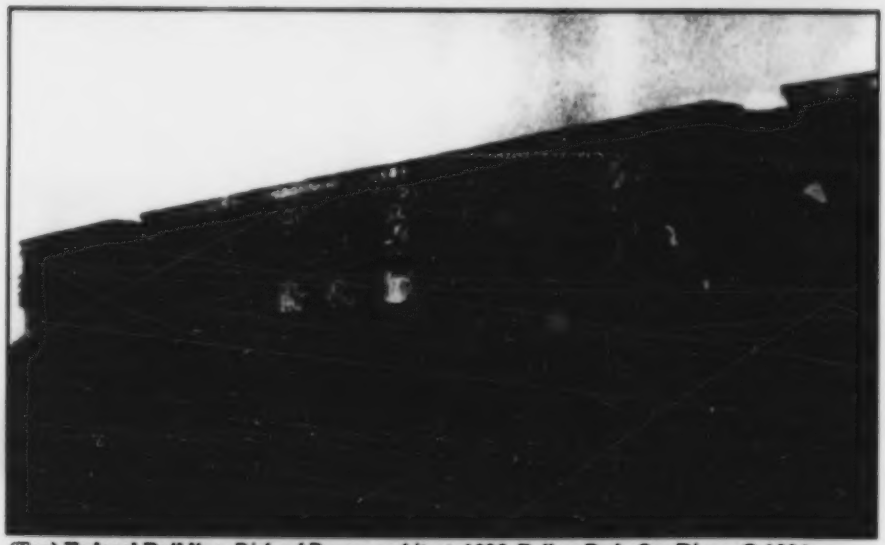
The Mayan Theatre. Los Angeles, California. Morgan, Walls and Clements. Maya Revival Style. 1927. © 1994 photograph by Ann Fuerst.

[1] Marjorie I. Ingle. *The Mayan Revival Style*. Albuquerque. University of New Mexico Press, 1984. p.45.

Federal Building, Balboa Park, San Diego

The only surviving example of the Maya Revival Style built after the depression for large fairs is the Federal Building in Balboa Park, San Diego. It was constructed for the 1935 California-Pacific International Exposition by Richard Requa. The architect's task was to renovate the buildings built in 1915 and to design a number of new structures. The Federal Building was one of the new structures.[1]





(Top) **Federal Building**, Richard Requa, architect. 1935. Balboa Park, San Diego. © 1994 photograph by Ann Fuerst. (Bottom) **House of the Governor**. Uxmal, Yucatan. East Facade. 10th century A.D. © 1994 photograph by Bernard Lueck, courtesy Heritage of the Americas Museum, El Cajon, California.

[1] Marjorie I. Ingle. *The Mayan Revival Style*. Albuquerque: University of New Mexico Press, 1984. pp. 66.

In this building you can see a re-creation, in part, of the Governor's Palace at Uxmal on the facade.[1] The California low lying two-story structure of pre-cast concrete has a tapered entrance way which suggests the opening was created by corbeling. This two story building of pre-cast concrete has ornamental designs derived from the Puuc region of the Yucatan. The Puuc style is a Late Classic transformation of Maya practice.[2]

One special feature of the facade of this building is the complex decoration on the roof line. It makes a striking contrast to the plain flat walls below. Some of the features like the mask on the lintel of the doorway have layers of wood forming the armature for the stucco-like decoration.

The House of the Governor at Uxmal was designed by an architect who wanted to capitalize on lighting and the complexities of the Maya time-division. He recessed the "corbel-vaulted arch behind the facade, and exaggerated the vault overhangs, carrying them in convexly curved soffits like curtains down nearly to the ground level, in order to accentuate the separation of the three pavilions by shadows and by striking contours."[3]

"The proportional groupings have overlapping and contrapuntal rhythms that recall the complexities of Maya time-division. The doorways in the three pavilions yield the grouping 2-7-2. The main eastern stairway marks another grouping: 3-5-3. Each corbelled archway is flanked by mosaic decorations in the frieze permitting the rhythm 5-3-5. The frieze, finally, has its own rhythmic order of several planes of geometric ornament in depth."[4]

Maya Architecture Activities

- Construct building components to demonstrate roof combs, mansard roofs, chamfer, and corbeling.
- Sketch and draw or photograph Mayan revival architecture.
- Discuss the differences between Maya architecture and Maya Revival architecture.
- Analyze effects of light, shape, scale, proportion, and technology on aesthetic quality.
- Identify basic kinds of Maya building construction.
- Analyze in writing emotional responses to various architectural environments (for example, Palenque vs. Chichén Itzá).
- Identify and interpret specified architectural exemplars such as the Temple of the Sun at Palenque, the most perfect of all Maya buildings.[5]
- Study purposes of Maya architectural construction.
- Make sketches and collect photographs that illustrate specific systems of Maya and Maya Revival construction.
- Study effects of Maya building materials (stones, wood, and mortar) on the final forms.[6]

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[1] Marjorie I. Ingle. *The Mayan Revival Style*. Albuquerque: University of New Mexico Press, 1984. pp. 66-67.
[2] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 234.
[3] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 243.
[4] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 243.
[5] See page 122 in this *Maya Art Activity Book*. Michael D. Coe. *The Maya*. New York: Praeger. 1971. p. 103.
[6] Based on the work of Michael Day and Kay Alexander in *Spectra*, Palo Alto, Dale Seymour Publications, Spectra Scope and Sequence/Grade 7.

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- Identify exemplars of world architecture. How do the Maya Temple pyramids compare with those of Mexico and Ancient Egypt? Identify the tallest Maya structure, the tallest building or man-made point in the Western Hemisphere until the first skyscrapers went up in Manhattan in the 19th century.[1]
- Answer these questions: When does construction become architecture? What architectural features are essential for worship? Sacrifice? What features are added for aesthetic purposes?
- Explain how Maya architecture reflects region, period, environment, technology, and culture.
- Investigate why architectural styles like the radial symmetry found in the Castillo at Chichén Itzá are recycled from one Maya era to another era.
- Consider why architectural ideas are sometimes revived from the Maya culture to public buildings like the Balboa Park Federal Building and private homes (Hollyhock House) in Southern California.
- Discuss what constitutes greatness in Maya architecture.
- Investigate why the Maya abandoned their architecture.
- Describe the role relief sculpture and stucco decoration played in the finished appearance of Maya architecture.
- Project what Maya architecture would look like if it were not painted with "Maya Blue" and other colors.
- Maintain an electronic portfolio of group discussions about Maya architecture.
- Contact another student or an architect on INTERNET and discuss his/her opinions on Maya or Maya Revival architecture.
- Record with photographs or electronic means exploratory constructions of Maya architecture or motifs.[2]

Western Galleries of Palace with Tower. Palenque, Chiapas, Mexico. P.7736.B. Photograph by Alfred P. Maudsley from nitrate negative and film positive. Theodore A. Willard Collection. © 1994 photograph courtesy of the Southwest Museum, Los Angeles.

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[1] The 212 foot temple IV in Tikal, the Temple of the Double-Headed Serpent, or temple at El Mirador which is 222 feet tall. The San Diego Museum of Man has a reproduction cast from a lintel of Tikal Temple IV. See Richard Mahler, *Guatemala*, Santa Fe: John Muir Publications, p. 256.

[2] Based on the work of Michael Day and Kay Alexander in *Spectra*, Palo Alto, Dale Seymour Publications, Spectra Scope and Sequence/Grade 7.

Outdoor Sculpture

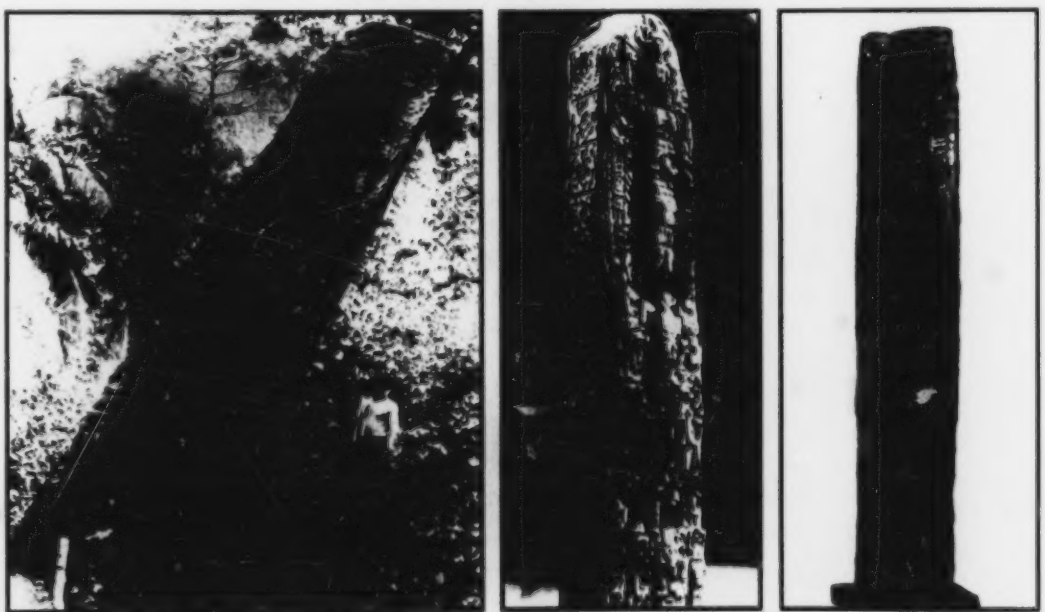
The Maya liked sculpture indoors and out. They liked carvings on man-made architecture on a reduced scale (less than life-size) and they liked monumental, free-standing, three-dimensional (3-D) sculpture that had a relationship to the natural world. Three types of free-standing outdoor sculpture will be discussed here:

1. stela
2. altar-type boulder
3. stairway

Stelae:

The Maya stelae are large oblong stones They usually stood planted before circular slabs in the temple plazas. The tallest of these stelae is 39' 4" and weighs 65 tons.[1] The stelae were intricately carved with stylized portraits of noble rulers. The sides or back recorded crucial dates in Maya hieroglyphs. Stelae recorded royal lineages and the dates of important battles, accessions to the throne, royal birthdays, and other significant events.[2] These free-standing monuments were decorated with low-relief sculptural compositions. The chief purpose of the stelae was to: 1) represent standing or seated historical people, 2) portray dynastic sequences, and 3) memorialize the passages of Maya time.[3]

The figures are beautifully balanced in appearance because of their bilateral symmetry. The facades of the monuments from which the heads emerge are lavishly covered with details of every



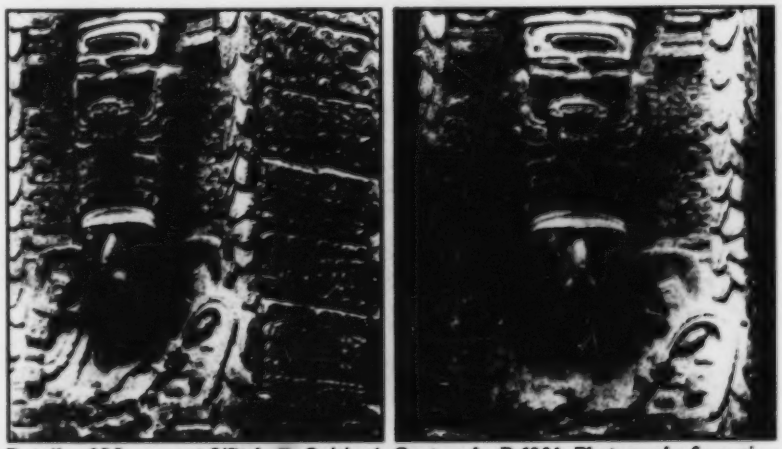
Three representations of monuments from Quiriguá, Guatemala: (left) **Monument 5/Stela E (south side view)**, A.D. 771. Sandstone. H: 39' 4" x W:5' x D: 4'2" with sculptured panel 26'6", (center) **Cast of Monument 4/Stela D**, A.D. 766. San Diego Museum of Man, (right) **Cast of Monument 5/Stela E** (north side view), San Diego Museum of Man. All three photographs © 1994 courtesy of the San Diego Museum of Man, San Diego, California.

[1] Hans-Dietrich Disselhoff and Sigvald Linne, *The Art of Ancient America*. New York: Greystone Press, 1966. p. 109.
[2] Norton, Natascha and Mark Whatmore, *Central America*, London: Cadogan Books, Ltd., 1992, p. 35.

kind. The glyphs are evenly spaced, and one almost has the vertical image of a figure that has sunk down deep into a soft bed and has been covered with the beautiful blocks of a quilt.

Compare for example the standing position of the stela figure with the erect figures represented vertically on the Buenavista Vase. With the exception of the heads, the tall stone monuments are carved with reliefs. The figures appear to be drawn on the stone and barely pierce its outer skin. The heads, on the other hand, are very plastic in appearance and remind us that the Maya were skilled craftsmen in the manipulation of clay.

The stelae pictured here in Quriguá are photographed in their natural surroundings. While they are free-standing—one can walk completely around them—the rulers carved on them are not sculptures in-the-round. The tall rectangular monuments have single human figures on two of the four vertical sides. Hieroglyphic writing appears on the other two sides. Because each figure is elevated upon a pedestal, one might fail to notice how short the larger-than-life-size figures really are. Compared to the proportions used by the finest Maya painters (see Buenavista Vase on cover), who use proportions we are familiar with in modern times, the sculptors of these stelae made figures with large heads, about one-seventh the size of the body instead of one-eighth.



Details of Monument 5/Stela E. Quiriguá, Guatemala. P.6201. Photographs from nitrate negatives, film positives by Alfred P. Maudsley. Theodore A. Willard Collection.
© 1994 photographs courtesy of the Southwest Museum, Los Angeles, California.

Wearing tall elaborate headdresses securely and low on their foreheads, and large ear decorations, the bearded figures with their open mouths appear to be very authoritative.

The inscriptions on the stelae were dedicatory and made after the death of the person depicted. On Stela E, the largest monolith erected in Maya territory, for example, the stela is dedicated to Lord Cauac Sky, the first ruler of the Sky Dynasty at Quiriguá. This stela was erected in A.D.766 and dedicated in A.D.771. It bears the text describing the installation of Lord Cauac Sky on the throne of Quiriguá. Cauac Sky, great Lord of Quiriguá, is the only leader believed to have buried a ballcourt by subsequent construction as a result of a major reorganization.[1] One of the reasons he reorganized may be because he needed a defensive plan to protect the central precinct.[2] Most ballcourts were oriented north-south along a broad medial axis

[1] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 130.
[2] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 130.

within or between courtyards or acropolis groups. But at Quiriguá there was one of the few exceptions. It was on an east-west axis.[1]

This great shaft of stone[2] was fashioned from sandstone with carving tools of flint, diorite, and basalt. The sandstone was close grained and had an even texture. When first quarried, it was somewhat soft, but it hardened with exposure to the air. The even grain made for uniform results under the chisels. When carving the glyphs on this stela, the sculptor apparently made an error of 360 days. Morley said, "When I first saw this monument, in February 1910, it was still standing, though perilously out of the perpendicular (12 feet at the top) like an exaggerated Tower of Pisa."[3] This was very fortunate. The image of Lord Cauac Sky is the best preserved Maya relief of any found because it was protected from the elements while the stela was inclined at an angle.

Monuments 1 and 3 (A and C)

These two stelae were erected almost simultaneously. These paired stelae are dedicated in 9.17.5.0.06 ahau 13 Kayab, the last period ending for over a thousand years in which this numerical configuration could occur.[4] The concept of pairing was important. The dancing, destructive deities carved in low relief on the south side of each stela suggest the sacrificial pair of Shark and Jaguar Gods. On the east side of stela C there is a series of glyphs where the Paddler Gods are mentioned as agents in the 4 ahau 8 Cumku event, and the passage ends with a reference to Six Sky.[5] Six Sky may be the name of the temple erected in the sky as part of one of the acts of creation.[6]

Quiriguá Monument Identification

Dates	Maudsley	Morley
A.D. 775	Stela A	Monument 1
A.D. 780	Altar B	Monument 2
A.D. 775	Stela C	Monument 3
A.D. 766	Stela D	Monument 4
A.D. 771	Stela E	Monument 5
A.D. 761	Stela F	Monument 6
A.D. 785	Altar G	Monument 7
A.D. 751	Stela H	Monument 8
A.D. 800	Stela I	Monument 9
A.D. 756	Stela J	Monument 10
A.D. 805	Stela K	Monument 11
A.D. 731	Altar M	Monument 13
A.D. 790	Altar O	Monument 23
A.D. 795	Altar P	Monument 16

(Left) **Monument 1/Stela A, Quiriguá, Guatemala.** limestone. A.D. 775. P.6195. Photograph from nitrate negative, film positive by Alfred P. Maudsley. Theodore A. Willard Collection. © 1994 photograph courtesy of the Southwest Museum, Los Angeles. (Center) **Cast of Monument 3/Stela C. Quiriguá, Guatemala.** limestone. A.D. 775. © 1994 photograph Courtesy of the San Diego Museum of Man, San Diego, California. (Right) Chart of Quiriguá Monuments (adapted after Josserand, 1993).

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[1] Vernon L. Scarborough, "Courting the Southern Maya Lowlands: A Study in Pre-Hispanic Ballgame Architecture." in Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 138.

[2] Morley refers to this as Stela "E." George Kubler, *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 250.

[3] Sylvanus G. Morley, *Guide Book to the Ruins of Quiriguá*. Washington: Carnegie Institute of Washington. p. 77.

[4] Marvin Cohodas, "Ballgame Imagery of the Maya Lowlands: History and Iconography." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p.276.

[5] Marvin Cohodas, "Ballgame Imagery of the Maya Lowlands: History and Iconography." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 278.

[6] Marvin Cohodas, "Ballgame Imagery of the Maya Lowlands: History and Iconography." Vernon L. Scarborough and David Wilcox, editors. *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 278.

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Genealogy and cosmology are connected on these two stelae according to Cohodas. "The cosmological importance of the 6 ahau period ending is placed in dynastic context in the inscription on the west side of Quiriguá Stela C, where rituals performed by the current ruler are compared to those performed by an earlier ruler, presumed to be the founder of the Quiriguá dynasty in 9.1.0.0.06 ahau 13 Yaxkin. The third major deity pair, the Headband Twins, concludes the inscription at the base of stela C... in combination with Venus and possibly lunar intervals, and in association with a 9 ahau...date. The paired stelae of Quiriguá thus illustrate the complex of paired sacrificer imagery in a most complete fashion, linking the 6 ahau period ending, symbolism of the number nine, and all three major pairs of sacrificial deities."[1]

"This is Your Life" The Maya Way

Representations of those ancient people of Quiriguá, who were portrayed in large monumental sculptures called stelae, are the inspiration for this art activity.[2] The San Diego Museum of Man has four stelae on exhibit, cast from the originals: Monuments 3, 4, 5, and 11. These large architectonic forms, analyzing great leaders in geometric terms (the cube extended), are very impressive, but primitive, because the contours of the block are hardly ever broken.[3] The monumentality of these sculptures lies not only in their size, but also in the simplicity and vigor of the portraits. In this activity students create "monumental" portraits of themselves or a leader whose life they wish to memorialize.

Materials:

Empty quart or half-gallon milk cartons or any other square or rectangular form; construction paper, tissue paper, butcher paper, or drawer liners; an assortment of magazines, shells, buttons, sequins, stickers, feathers, or any other types of collage material; glue, scissors

Directions:

1. Discuss the Maya, and where they lived. Explain about their life in a city.

2. Investigate monumental architecture and concentrate on the stelae. Try to bring in examples of stelae from photos in *National Geographic* magazines.[4] Ask students to bring from home items that would describe their life (i.e., ticket stubs from a ball game or theatre performance, photos, charms, special ribbons, etc.).

3. During the next class, have students glue the paper covering to the milk carton. Ask students to think about how they would arrange their items from home and the ones you have provided to tell a story about their lives. Have them glue these items, or copies of them, on the simulated stelae. For evaluation, ask students to "read" the life stories on each other's stelae. Notice if the students have been thoughtful about what has been brought from home. Observe the care, thought, and skill that have gone into preparing one's life story. Do the students enjoy reading each other's stelae?

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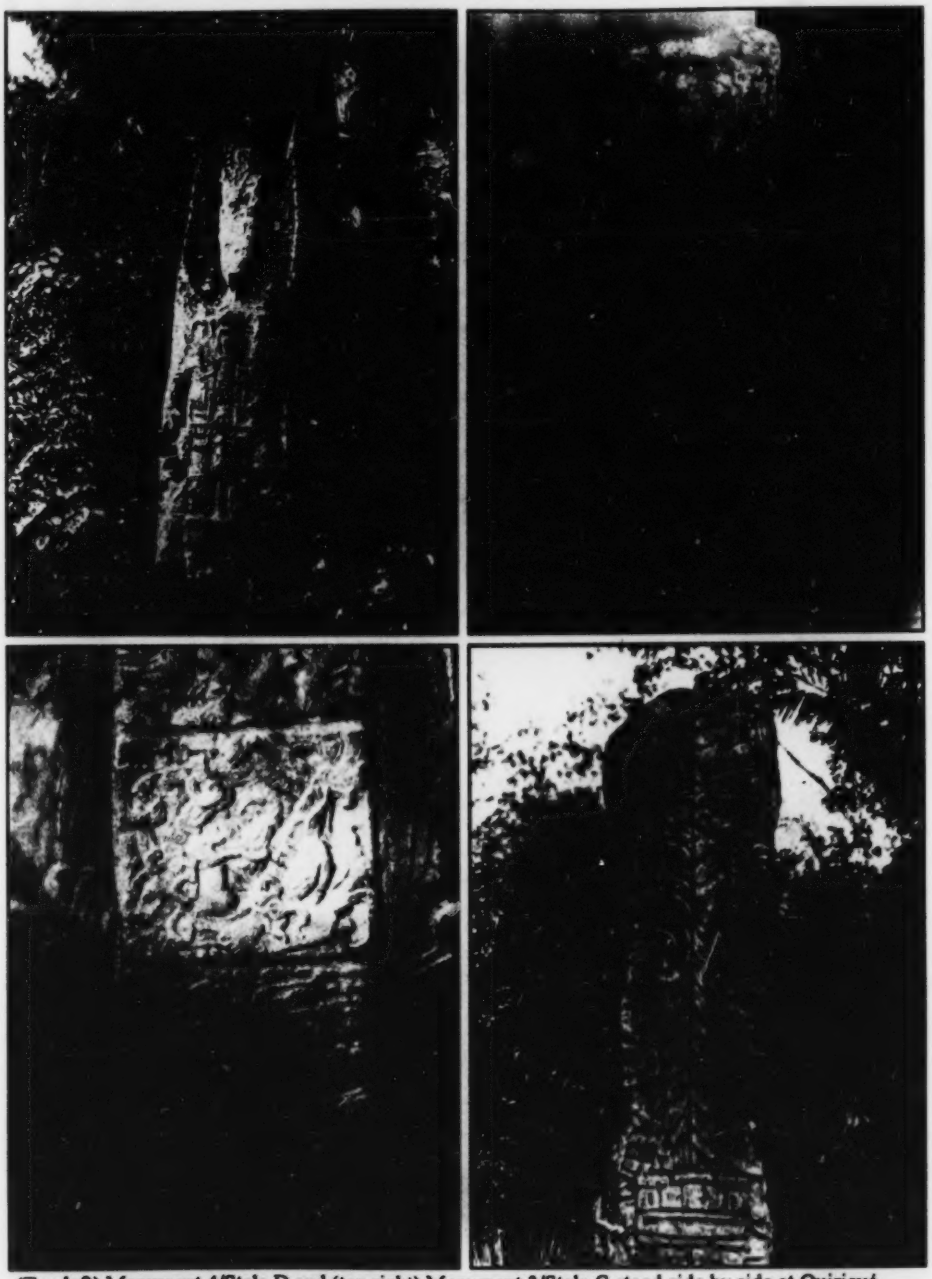
[1] Marvin Cohodas, "Ballgame Imagery of the Maya Lowlands: History and Iconography," in Vernon L. Scarborough and David Wilcox, editors, *The Mesoamerican Ballgame*. Tucson: The University of Arizona Press. 1991. p. 278.

[2] This activity is based on one developed by the Education Department, San Diego Museum of Man, 1994.

[3] Lorenz Eitner, *Introduction to Art*. Minneapolis: Burgess Publishing Company. 1961. pp. 96-98.

[4] One issue on the Maya is October 1989. To purchase for $2.65, call 1-800-638-2728.

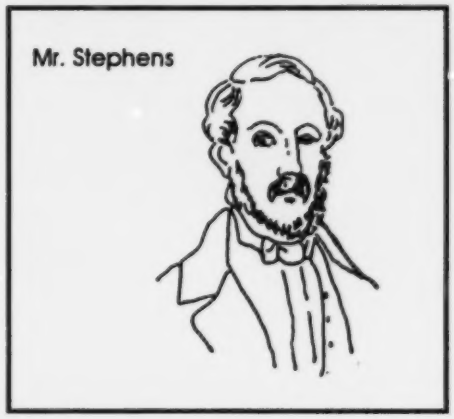


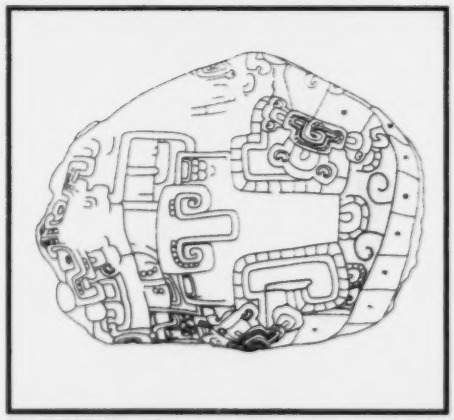
(Top left) Monument 4/Stela D and (top right) Monument 3/Stela C stood side by side at Quiriguá. Casts of both these monuments are in the San Diego Museum of Man. These two photographs © 1994 courtesy San Diego Museum of Man, San Diego, California. (Bottom left) Glyphs on Monument 4/Stela D. Photograph of cast of Monument 4 by Ann Fuerst, courtesy of San Diego Museum of Man. (Bottom right) Monument 6/Stela F (detail, west side). A.D. 761. Photograph from nitrate negative, film positive by Alfred P. Maudsley. Theodore A. Willard Collection. © 1994 photograph courtesy of the Southwest Museum, Los Angeles, California.

Directions at Quiriguá

In the following activity series called directions at Quiriguá, students have an opportunity to enhance their ability to use concepts and a stable system of reference for describing spatial relationships. By imagining the explorer Mr. Stephens and his artist Mr. Catherwood before the monuments at Quiriguá, students learn that perception of an object or event depends on one's vantage point and that the relation between pairs of objects shifts with the change in the position of the parties in the relationship.[1]

Students are asked to give precise responses to indicate the positions of the monuments as "front," "back," "left," or "right" of the two men. The four monuments and the unnamed structure were actually found at the north end of the archaeological site of Quiriguá and studied by Mr. Catherwood and Mr. Stephens. Illustrated on the preceding page and below are pictures of four of the monuments and a sketch of Mr. Stephens.

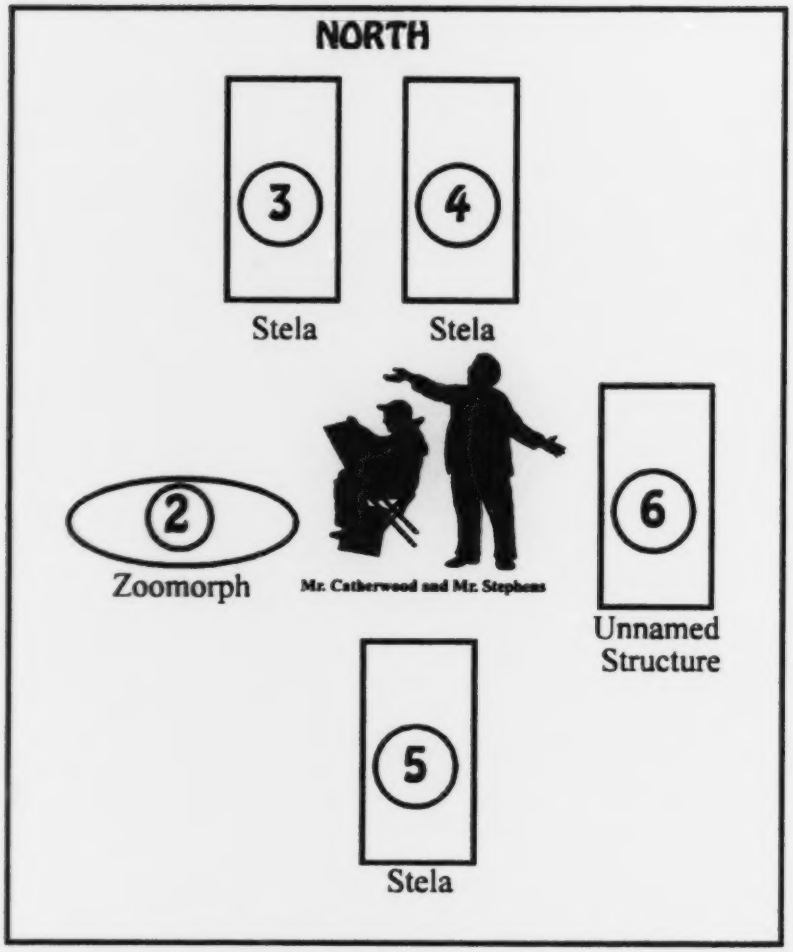




Pictured here and the preceding page are several of the monuments and their discoverer. Keep these images in mind when using the activities on the next few pages: (top left) Mr. Stephens. (Bottom Left) Monument 2/Zoomorph B. (Right) Monument 5/Stela E. Casts of both these monuments are in the San Diego Museum of Man. Photograph of Stela E © 1994 courtesy San Diego Museum of Man, San Diego, California.

[1] These activities on pages 137-144 are based on the work of Reuven Feuerstein, et al., *Don't Accept Me as I Am*. New York: Plenum Press. 1988. p. 215.

Directions at Quiriguá



Illustrated here are the positions of four monuments and an unnamed structure found at the north end of the archaeological site of Quiriguá and studied by Mr. Catherwood and Mr. Stephens. Complete the following sentences to indicate the positions of the monuments as "front," "back," "left" or "right" of the two men.

1. The Zoomorph Monument # 2 is _____.

2. To the left of the men is _____

3. The stela Monuments 3 & 4 are _____

4. Stela Monument # 5 is _____

5. In back of the two men is_____

6. The unamed structure is_____

7. In front of the men is _____

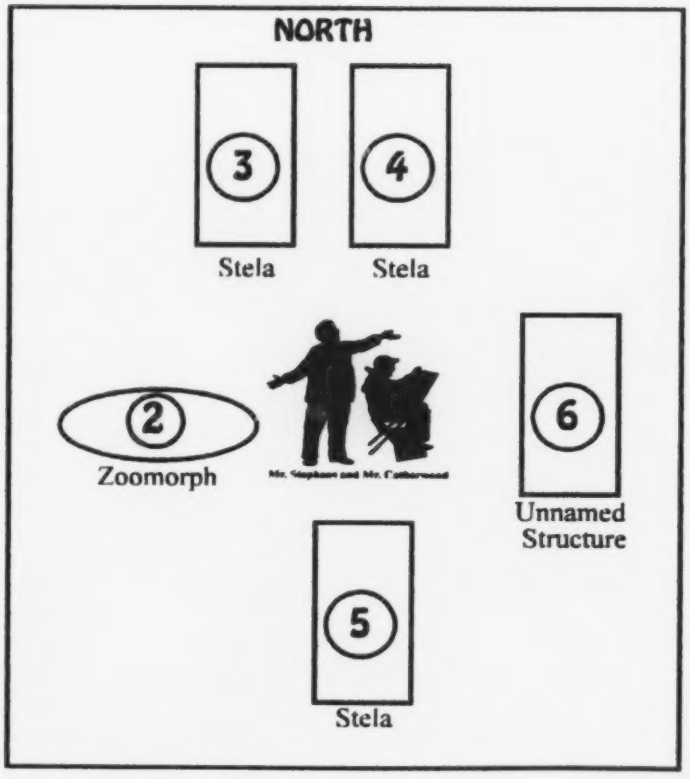
8. If the men turn to the right they will be looking at _____

9. To study stela # 5, the men will have to _____

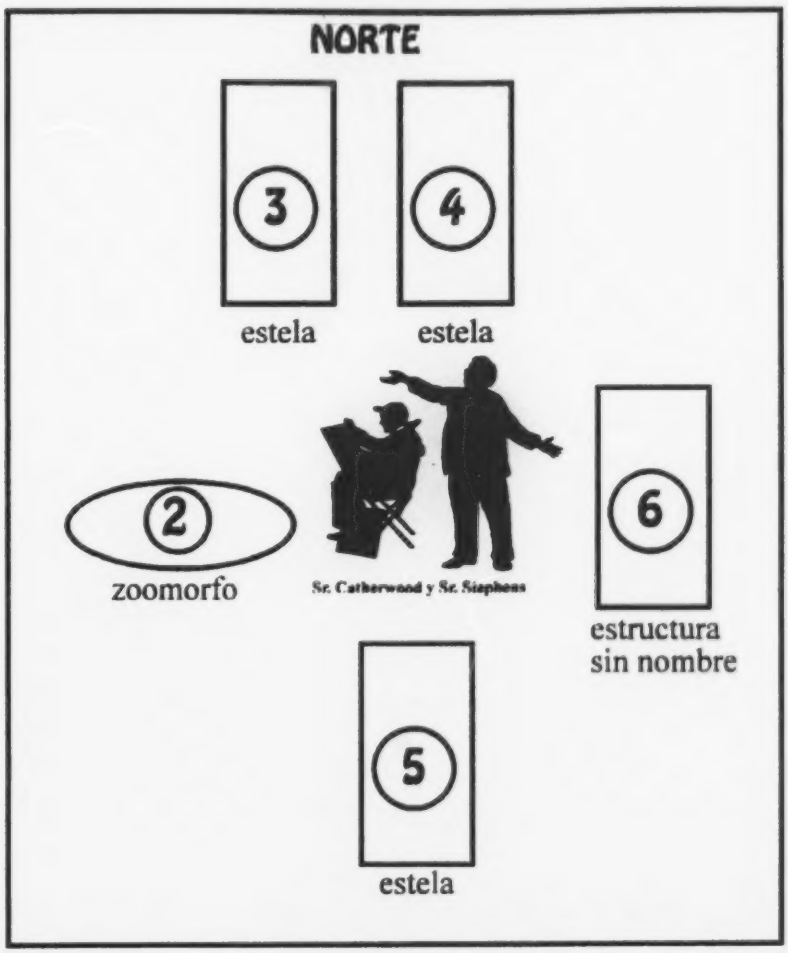
10. Write a paragraph describing the direction in which the monuments are found in relation to the two men.

_____
_____
_____
_____
_____

If you need more help with directions, try the questions again, this time use the men in a different position.



Ubicacion en Quiriguá



En este dibujo se encuentran cuatro monumentos y una estructura sin nombre que estudiaron los señores Catherwood y Stephens en la zona norte del centro arqueológico de Quiriguá. Termine las frases, indicando la ubicación de los monumentos en relación a los dos señores, con las palabras "enfrente," "atrás," "izquierda," y "derecha."

1. El monumento zoomorfo # 2 está _____

2. A la izquierda de los hombres está _____

3. Los monumentos estela #3 y estela #4 están _____

4. El monumento estela #5 está _____

5. Altrás de los dos hombres está _____

6. La estructura sin nombre está_____

7. Enfrente de los hombres está _____

8. Si los hombres voltean a la derecha estarán mirando a_____

9. Para observar la estela #5 los hombres tendrán que _____

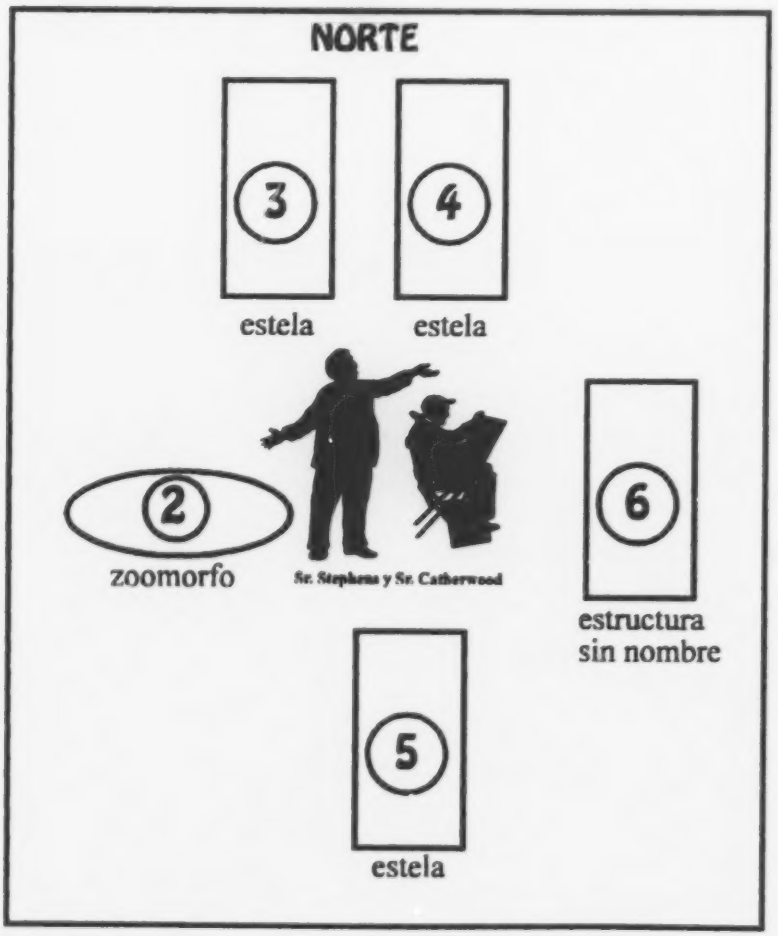
10. Escriba un párrafo describiendo la ubicación de los monumentos en relación a los dos hombres.

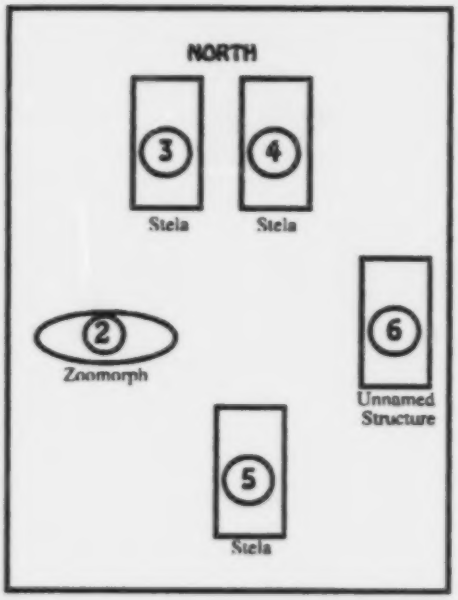
_____

_____

_____

Si necesita más ayuda con la orientación, intente las preguntas de nuevo, cambiando la postura de los hombres.





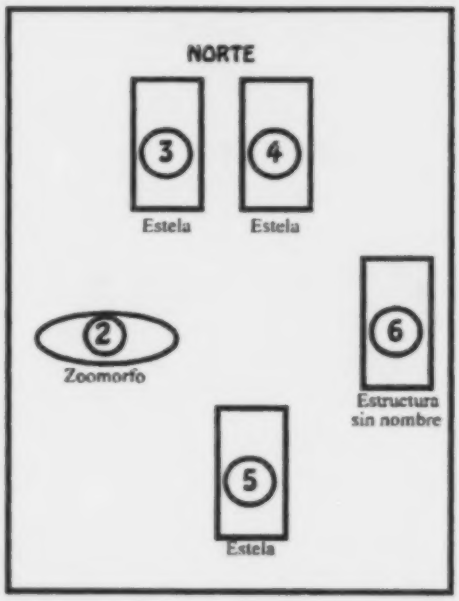
Where are the Monuments at Quiriguá?

Position No. 1

Position No. 2

Look at the positions of the two men above and the direction the two of them are facing. Using the words "right," "left," "front," or "back," describe the direction of the monuments in relation to the positions of the men.

Position of men	**Monument**	**Direction in Relation to the Men** (*"right," "left," "front,"* or *"back"*)
1	Zoomorph #2	
2	Stela #5	
1	Monuments #3 and #4	
1	Unnamed Structure	
2	Zoomorph #2	
2	Unnamed Structure	
1	Stela #5	
2	Monuments #3 and #4	



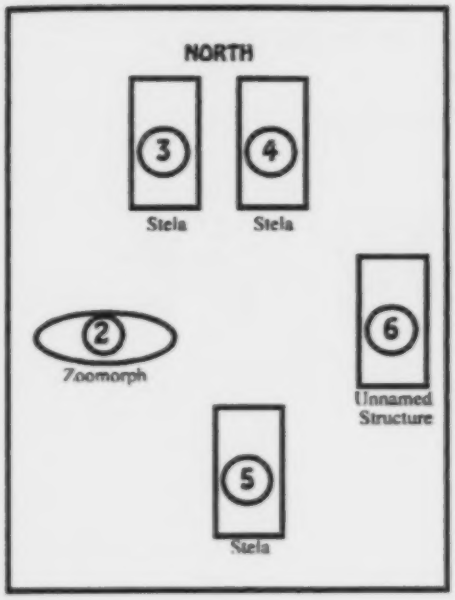
¿Donde estan los monumentos en Quiriguá?

Posición

Número 1 Número 2

Observe la posición de ambos hombres y la orientación de los dos. Usando las palabras "derecha" o " "izquierda," "enfrente," o "atrás," describe la ubicación de los monumentos en relación a la posición de los hombres.

Posición de los hombres	**Monumento**	**Ubicación en relación a los hombres** (*"derecha," "izquierda," "enfrente," "atrás"*)
1	Zoomorfo #2	
2	Estela #5	
1	Monumentos #3 y #4	
1	Estructura sin nombre	
2	Zoomorfo #2	
2	Estructura sin nombre	
1	Estela #5	
2	Monumentos #3 y #4	



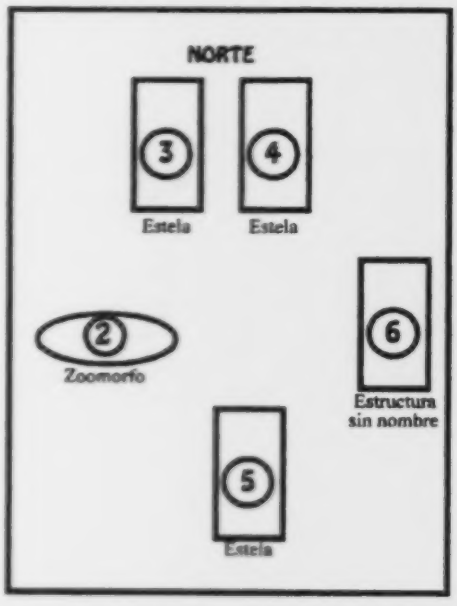
Identify the Monuments at Quiriguá

Position No. 1

Position No. 2

Correctly identify the objects when given the relationship to the position of the men above.

Position	**Direction** *(in Relation to the Men)*	**Monument (s)** *(Zoomorph "2, Stelae "3 & 4," Stela "5," or Unnamed Structure)*
1	right	
2	front	
1	back	
1	front	
2	right	
2	left	
1	left	
2	back	



Identifique los monumentos en Quiriguá

Posición

Número 1 Número 2

Identifique los objectos basándose en su ubicación en relación a los dos hombres.

Posición	**Ubicación (en relación a los hombres)**	**Monumento (s)** *(Zoomorfo "2", Estelas "3 y 4", Estela "5" o Estructura sin nombre)*
1	Derecha	
2	En frente	
1	Atrás	
1	En frente	
2	Derecha	
2	Izquierda	
1	Izquierda	
2	Atrás	

Maya Glyph Sort

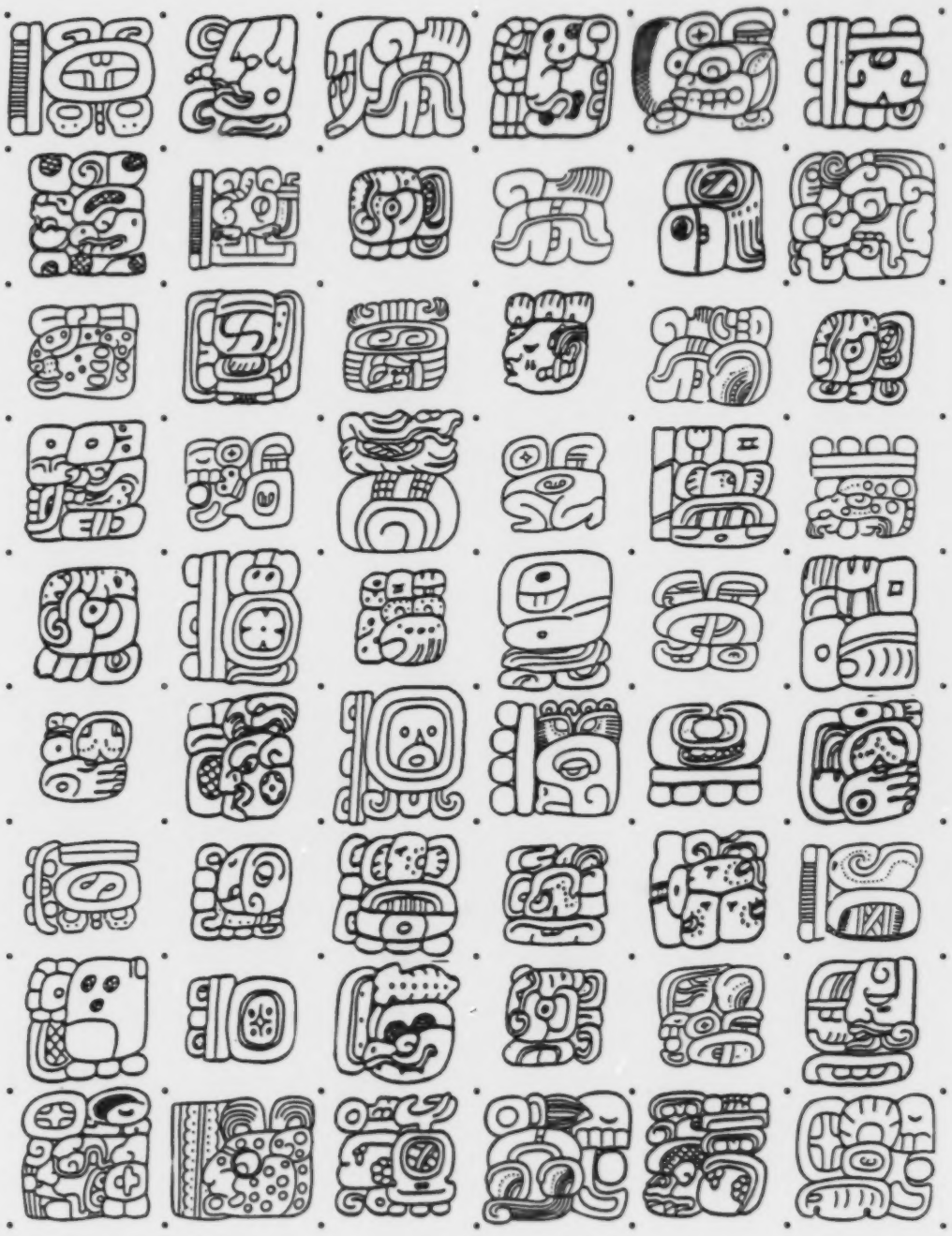
All the Maya glyphs pictured here appear on sculpture. With a partner, cut out the images, create categories for the glyphs, then sort the images into those categories. Hand letter or word process the titles of the categories you and your partner created. Attractively arrange the glyphs on a chart to display for others. To learn how to categorize glyphs you might want to study the work of Sir Alan Gardner, who made a sign list for another ancient civilization. His list of Egyptian Hieroglyphs had some 750 signs.[1] His categories included, among other things, "unclassified shapes," "parts of the human body," "parts of mammals," and "parts of birds." You might use these categories, or create your own. For example, your categories might include all shapes that have "profiles of human faces" or all glyphs with "concentric circle forms."[2]

Sample Sort
Human Faces

Sample Sort
Concentric Circle Forms

[1] Richard H. Wilkinson. *Reading Egyptian Art: A Hieroglyphic Guide to Ancient Egyptian Painting and Sculpture*. London: Thames and Hudson, 1992. p. 8.
[2] All glyphs were drawn by Linda Schele and Ian Graham. Reprinted with permission of the artists.

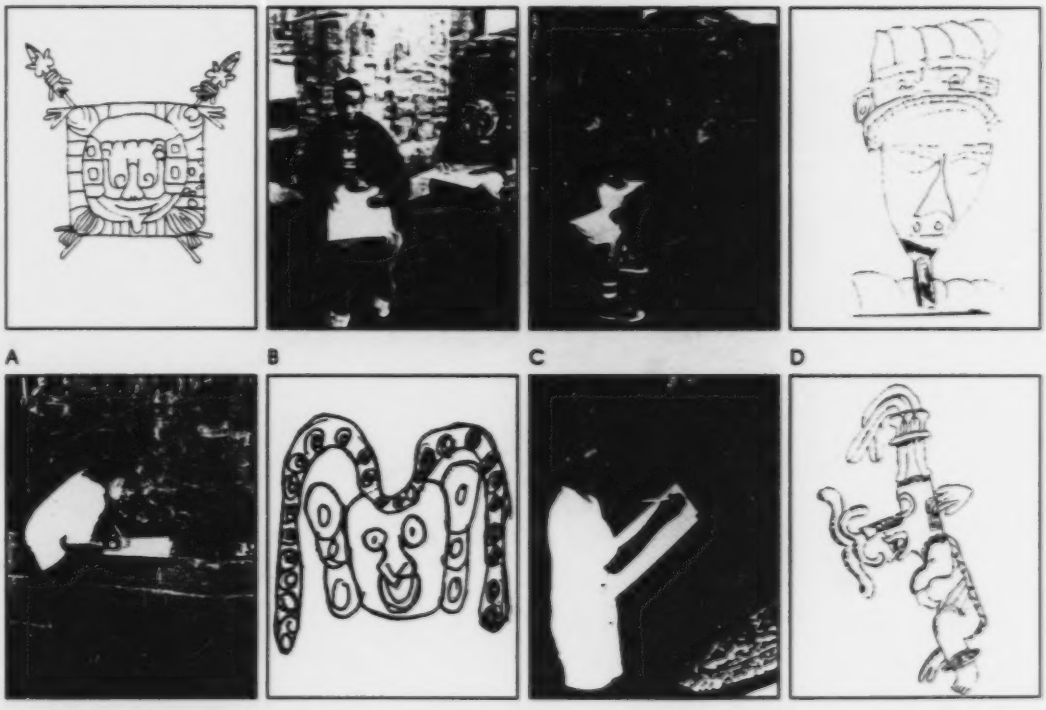
More Maya Glyphs (Clip Art) for Young Epigraphers



Student Illustrations

Eight students from seven different San Diego County schools participated in a summer-time Maya illustration art project for this book at the San Diego Museum of Man. These young people, ranging in ages from 8 to 14, were recommended by an educator who knew of their interest in art. The students were given bristol paper, pencils and pens, and a quick tour of the Maya collection. In the two and a half hours that followed, the students drew and copied in ink and worked in clay. The clay reproductions they made were photographed on site with the originals since there were no facilities for firing at the time.

This hand picked group was excited about their work. As soon as they finished a drawing, they brought it to their leader and got another piece of paper or lump of clay. The young artists worked with clay on top of newspapers, right on the floor of the museum in front of the monuments. Two sections of a paper-towel roll was all they needed to "dry clean" their hands before going to the restroom. Using red clay helped them to better understand the majority of clay objects on display in the museum. Their work was handled as if it were as precious as the originals!



A B C D

E F G H

(A) Drawing by Arika Suber of detail on cast of Tablet of the Sun. (B) Arika Suber (left) and Briana Heine, both 9th graders, age 14, drawing in the San Diego Museum of Man. In the Sweetwater Union High School District, Arika attends Chula Vista High School and Briana goes to Bonita Vista High School. (C) David Dapeer, age 10, grade 5, Avocado School, Cajon Valley Union School District, drawing Lord "Two-legged Sky" from a cast of the original. (D) David's drawing. (E) Jennifer Heine drawing a manikin from cast of monument 16. (F) Drawing by Karen Birdsell of upper mask in wooden relief from Temple IV. Karen is 10, in grade 5, Karl H. Kellogg School, Chula Vista Unified School District, Chula Vista, California. (G) Christopher Suber is 8 in grade 4, Karl H. Kellogg School. He is drawing the Governor of Quiriguá. (H) Drawing of manikin by Jennifer Heine. Jennifer is 11, in 7th grade, Bonita Vista Middle School, Sweetwater Union High School District.

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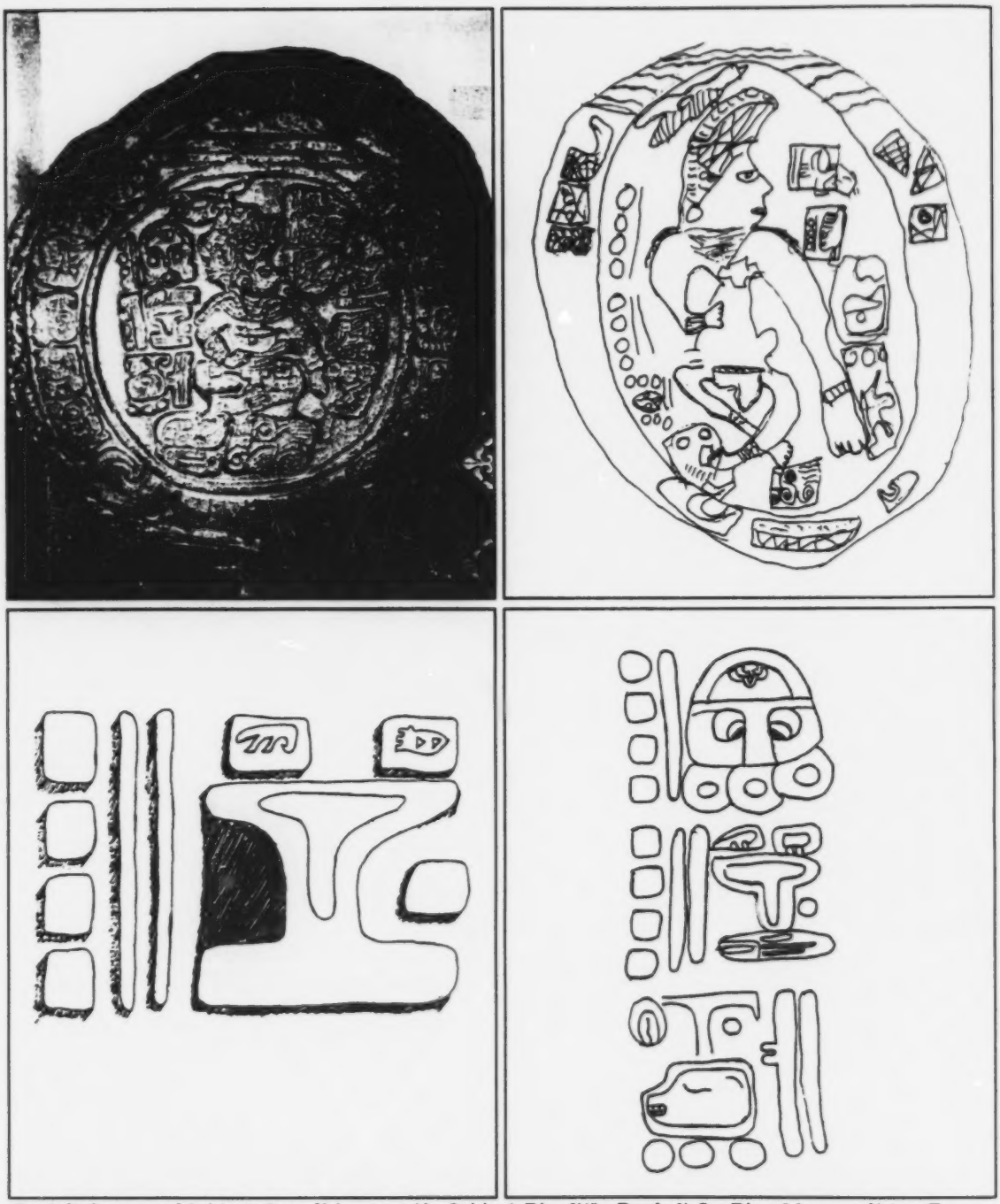
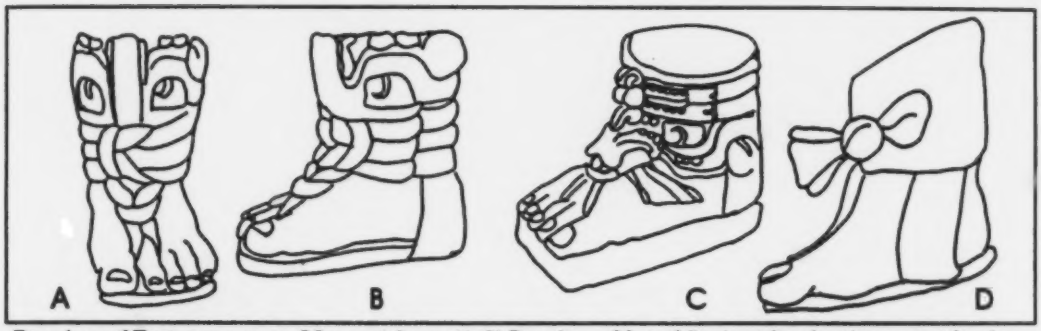


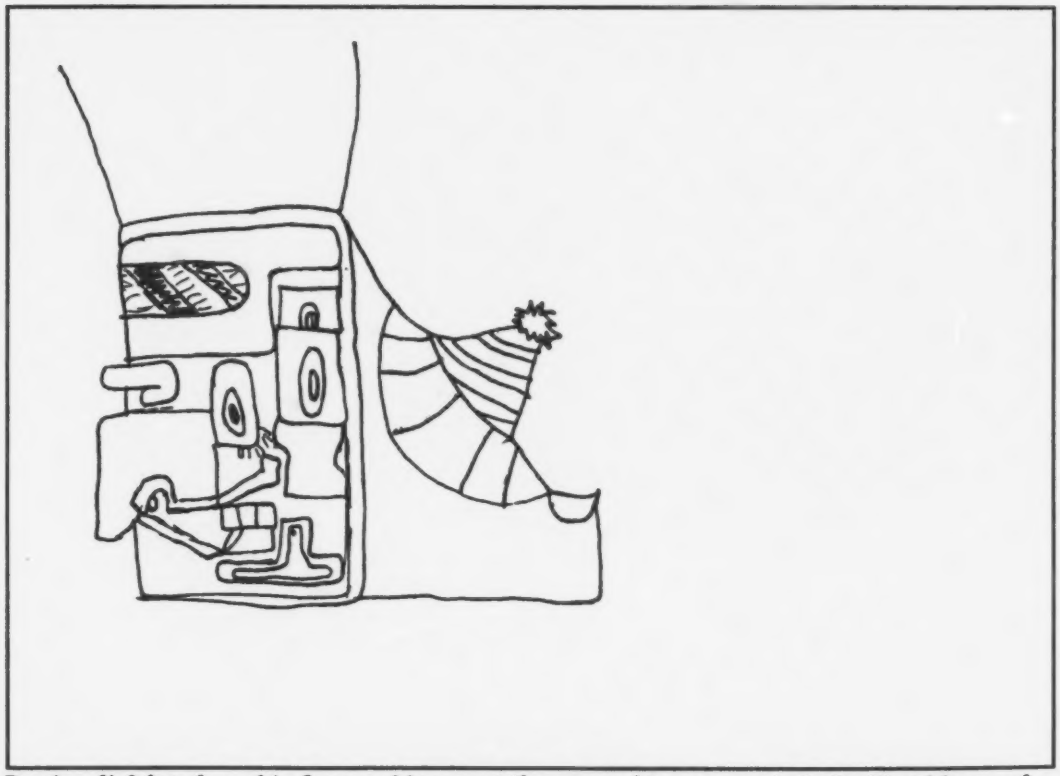
(Top left) Governor of Quiriguá, Cast of Monument 12, Quiriguá. Dia.: 3'4" x Depth: 1'. San Diego Museum of Man. (Top right) Drawing of Governor of Quiriguá by Christopher Suber, 8 years old, 4th grade, Kellogg Elementary, Chula Vista Elementary School District, Chula Vista, California. (Bottom left) Drawing of glyph from cast of Monument 12, Quiriguá, by Briana Heine, age 14, grade 9, Bonita Vista High, Sweetwater Union High School District, Chula Vista, California. (Bottom right) Drawing of glyphs from cast of Monument 12, Quiriguá by Andrea Medina-Smith, age 11, Grade 6, School of Creative and Performing Arts, San Diego Unified School District, San Diego, California.



Drawings of Footwear seen on Maya art forms.(A-C) Drawings of feet of Copán stelae showing serpent-head ankle ornaments (after Spinden). (D) Right foot of Lord Macaw on a limestone relief in the Los Angeles County Museum of Art.

Make your Own Footwear!

The Maya decorated their sculptures with wonderful footwear. The backs of their "High-tops" were very elaborate, while the front portion of their sandles exposed the bare foot. The top of the foot was decorated too. Look at the carvings and draw the footcoverings you see. Some feet of the stelae figures at Copán had serpent-head ornaments. Describe the foot coverings you design and color your illustration.

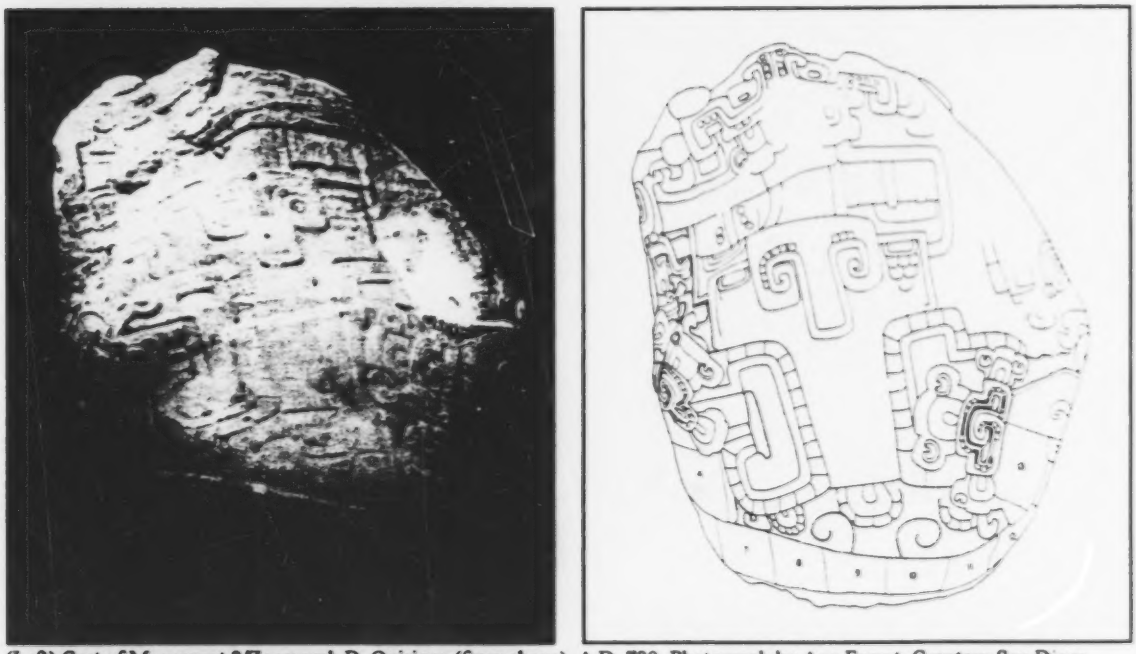


Drawing of left foot of one of the figures on Monument 4 (from a cast of the monument in the San Diego Museum of Man) by Andrea Medina-Smith, age 11, Grade 6, School of Creative and Performing Arts, San Diego Unified School District, San Diego, California.

Cosmic Monster Sculpture

There are two examples of Maya zoomorphic sculpture in the San Diego Museum of Man. These two large sculptural forms are reproductions cast from the originals at Quiriguá. They both have the same theme. Quiriguá was the only Maya site to portray this cosmic monster theme as colossal sculptures in-the-round.[1] The zoomorph sculptures appear to be efforts to conserve the weight and bulk of the stone at all costs. These great boulders seem to respect the natural boundaries of the raw materials. The sculptor carved the designs using a plano-relief carving technique. In plano-relief, the background is carved to produce a design in two planes, front and rear, without any modeling between the ground and the figure.[2]

The cosmic monster is a polymorphic reptile, most likely crocodilian. This monster sometimes has heavy eyelids with ornate lashes, a "head" net, and designs referring to "water." The whole design of the zoomorphs might be imagined like a collapsed telescope or drinking cup. What an artist might normally carve on a vertical stone, he/she has carved here on a horizontal plane. The ancient Maya were an audience thoroughly familiar with the content and system of abstraction. The major cosmic element of the Celestial Monster and of other serpents that might have cosmic meanings is, indeed, blood.[3]



(Left) Cast of Monument 2/Zoomorph B, Quirigua (from above). A.D. 780. Photograph by Ann Fuerst, Courtesy San Diego Museum of Man. (Right) Drawing of Monument 2/Zoomorph B, Quiriguá (from above) by Andrea Stone. Reprinted with permission of the artist.

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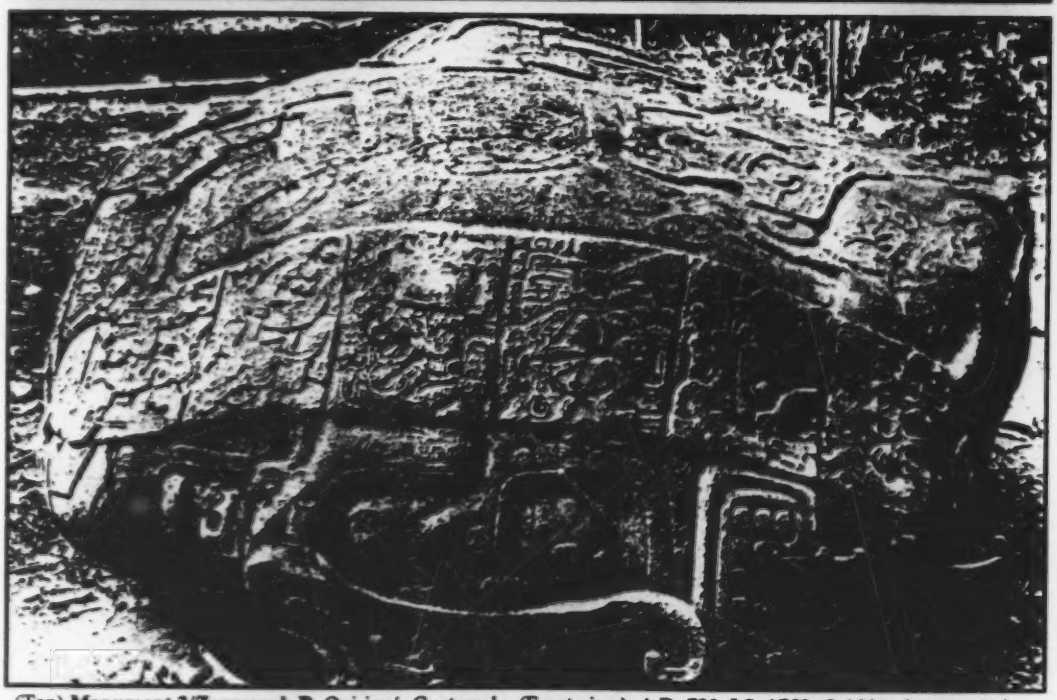
[1] Andrea Stone, "Variety and Transformation in the Cosmic Monster Theme at Quiriguá, Guatemala." *Fourth Palenque Round Table*, Vol. VI, 1980. p. 39.
[2] George Kubler, *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 286.
[3] Elizabeth Benson and Gillett G. Griffin, editors. *Maya Iconography*. Princeton: Princeton University Press. 1988. p. 206.



(Top) **Monument 2/Zoomorph B.** Quiriguá, Guatemala. (Front view). A.D. 780. LS. 1753. © 1994 photograph from nitrate negative # 41995 by Alfred P. Maudsley. Theodore A. Willard Collection. © 1994 photograph courtesy the Southwest Museum, Los Angeles, California. (Bottom) **Monument 2/Zoomorph B**, Quiriguá, Guatemala. (Back view). A.D. 780. #5102. © 1994 photograph courtesy the San Diego Museum of Man, San Diego, California.

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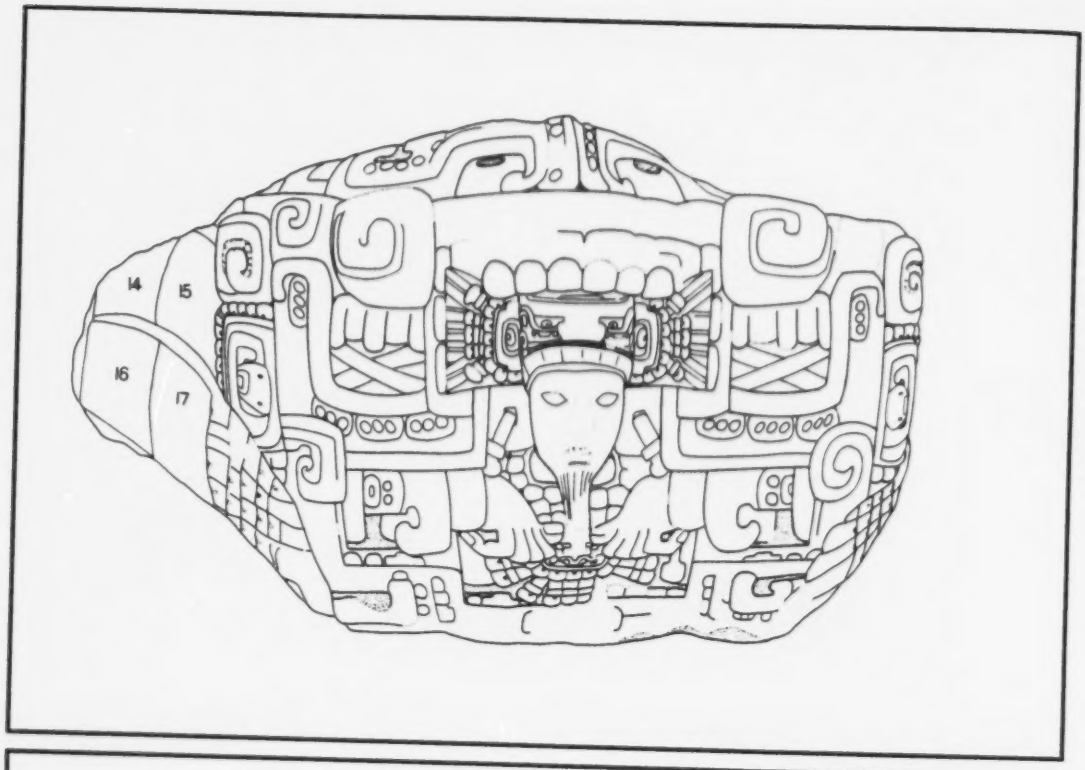
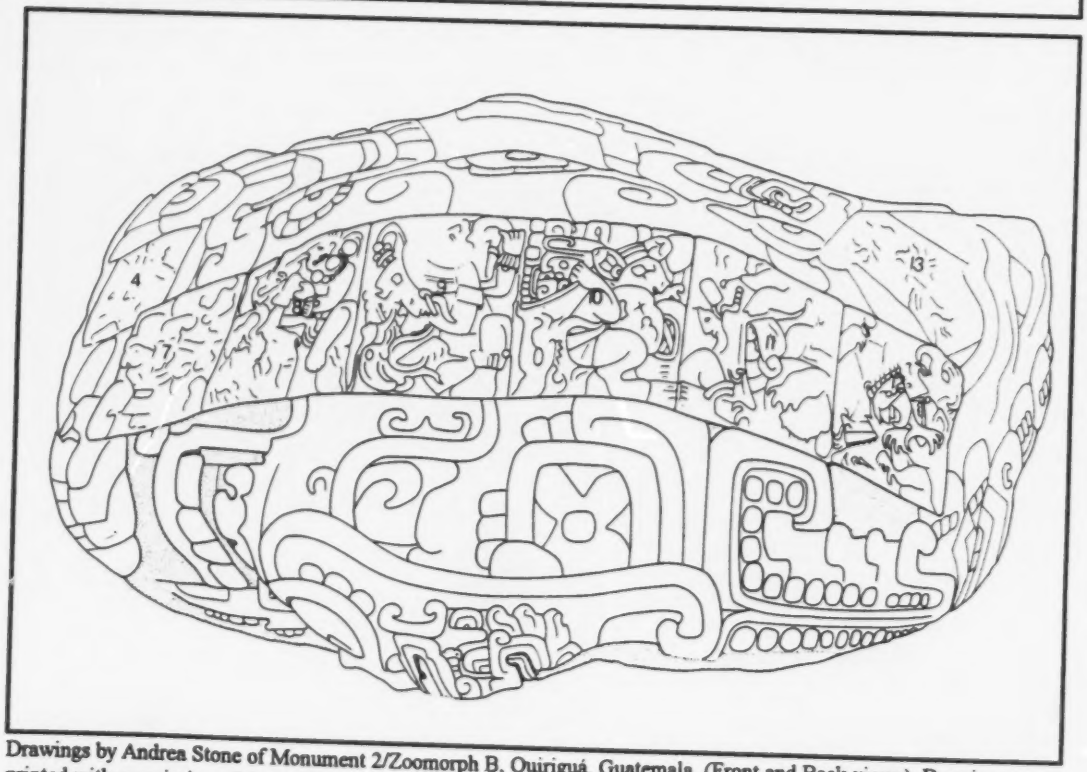
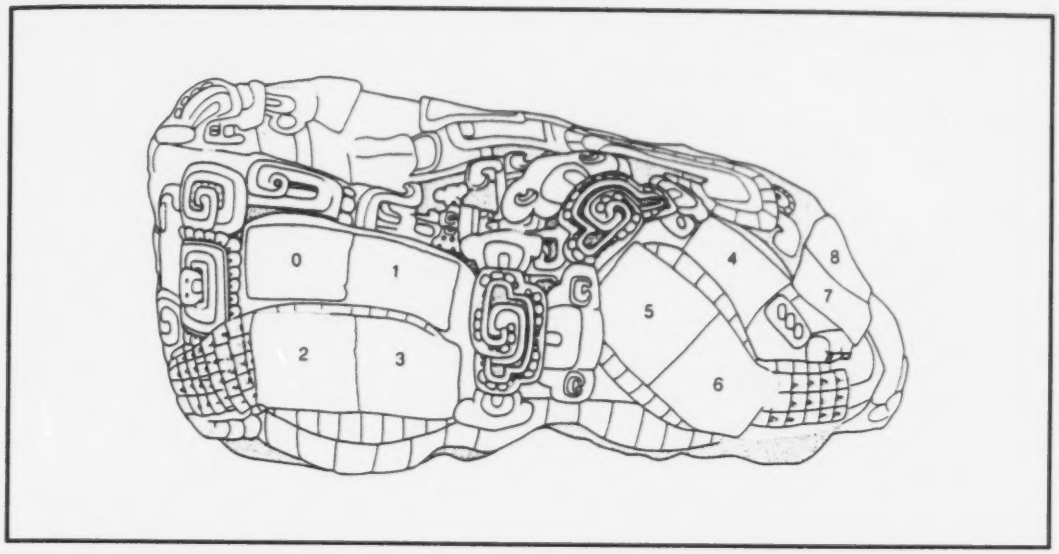
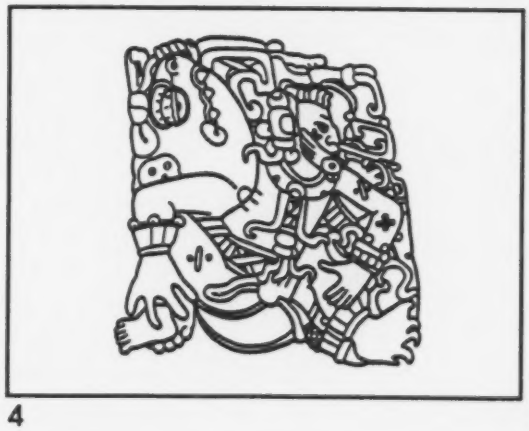




Drawings by Andrea Stone of Monument 2/Zoomorph B, Quiriguá, Guatemala. (Front and Back views). Drawings reprinted with permission of the artist.





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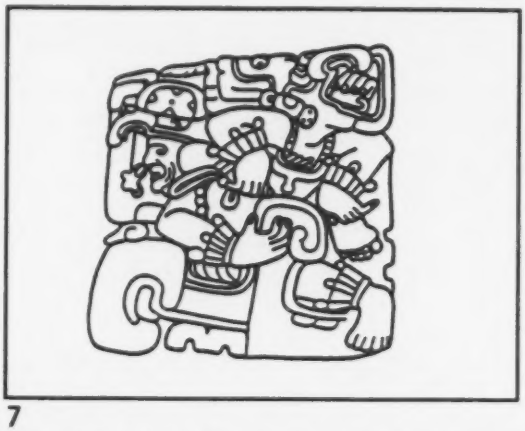
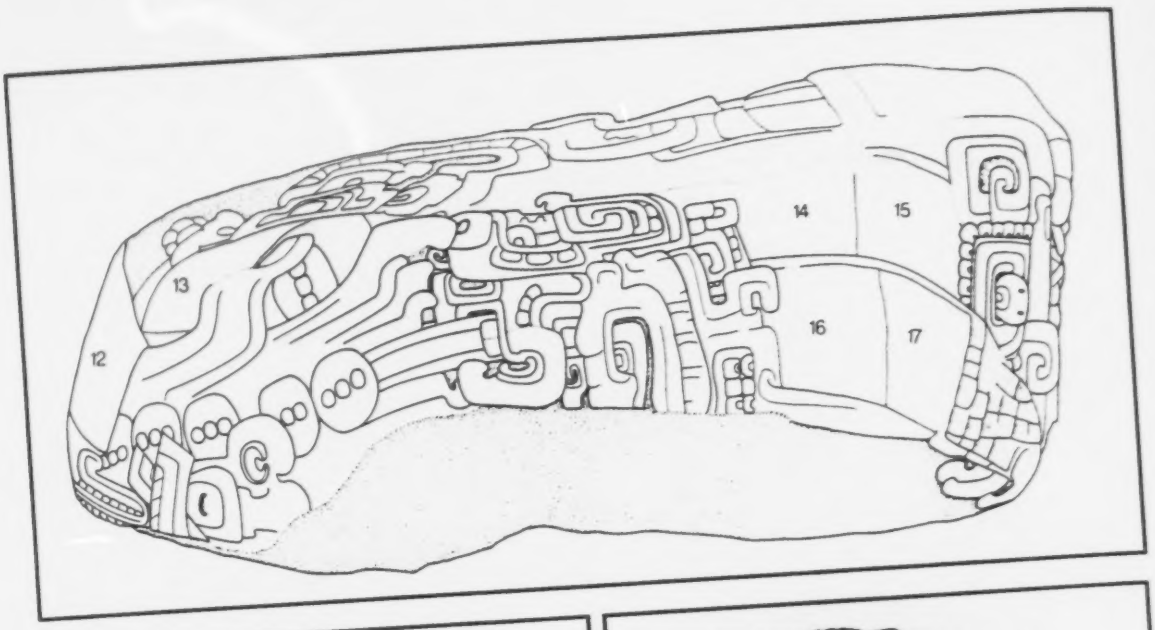
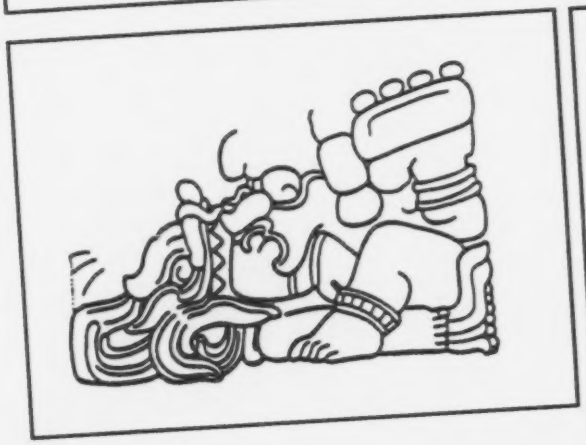


7

(Top) Drawing by Andrea Stone, left side of Monument 2/Zoomorph B, Quiriguá. (Center and bottom) Four drawings of glyphs by Matthew Looper located on left side. All drawings reprinted with permission of the artists.





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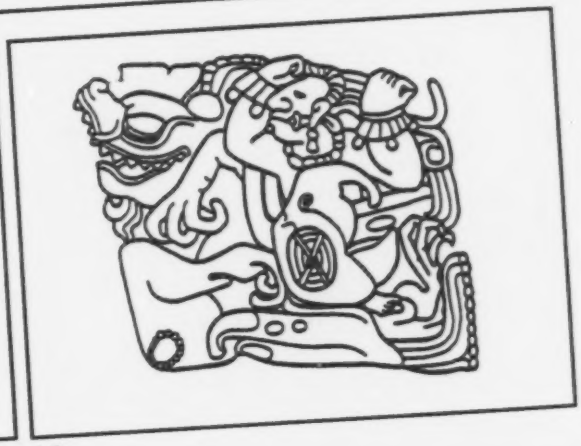

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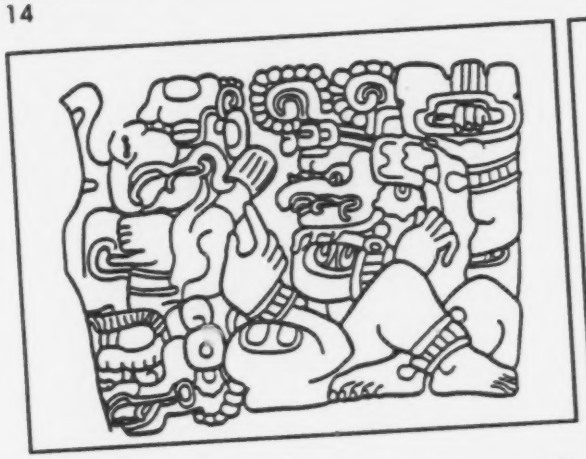

16

17

(Top) Drawing by Andrea Stone, right side of Monument 2/Zoomorph B, Quiriguá. (Center and bottom) Four drawings by Matthew Looper of glyphs on the right side of the monument. All drawings reprinted with permission of the artists.

Monument 16/Zoomorph P

The ruler on this zoomorph sits in the mouth of the cosmic monster holding a God K scepter and a shield. The body of this monster is that of the "Cauac monster," possibly with earth associations. This amazing sculpture represents a mythological earth monster in a crouching position. Look at the magnificently executed seated human figure at the front of the sculpture. This beardless figure, sitting cross-legged in the jaws of the earth monster, holds a Manikin Scepter in his right hand, the ceremonial bar of kingship. His left hand is concealed by a small round shield.

Because the ruler is represented in the grip of the mythological earth god, his reign is legitimate. In effect, the sacred earth which gives life to all things has placed the ruler on the throne. He has been identified as Imix Dog, a regent ruling under the sanction of Lord Cauac Sky. The date A.D. 795 marks the beginning of Imix Dog's reign at Quiriguá.

(Left) **Cast of Monument 16. Quiriguá.** A.D. 795. Photograph by Ann Fuerst, Courtesy San Diego Museum of Man, San Diego, California. (Center) **Drawing of Imix Dog** on cast of Monument 16 by Sergio Velázquez. (Right) Sergio Velázquez, 12 years old, 7th grade. Hilltop Middle School, Sweetwater School District, Chula Vista, California.

In Monument 16 the doubleheaded earth appears again as in Monument 2. The front head is linked with the sun, while the rear head is associated with the planet Venus. These were twin heroes in Maya mythology. This monument was dedicated in A.D. 780, a date related to the bearded noble whose head and arms emerge from the monster's jaws. The flanks of the zoomorph are carved with more serpent heads.

To the left of the mask at the back of the monument is a calendar giving the dedication date. This is the only monument at Quiriguá which departs from the lunar calendar in numbering the moons.[1] With the erection and dedication of this sculpture, the third stylistic division at Quiriguá—the zoomorphic group—comes to an end.[2]

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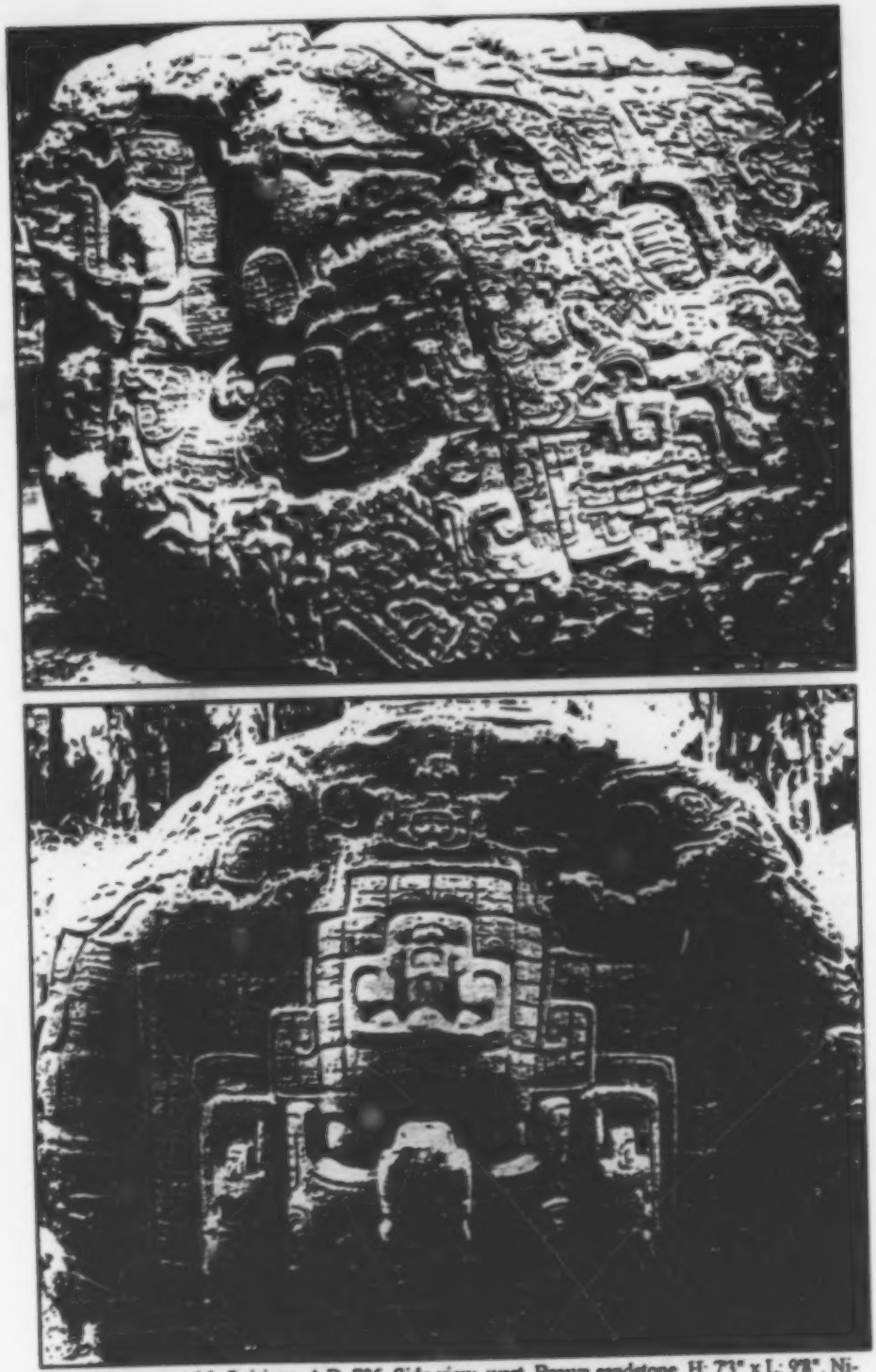
[1] Sylvanus G. Morley. *Guide Book to the Ruins of Quirigua*. Washington. Carnegie Institute of Washington, 1935, p. 111.
[2] Sylvanus G. Morley. *Guide Book to the Ruins of Quirigua*. Washington. Carnegie Institute of Washington, 1935, p. 109.



(Top) **Monument 16**. Quirigua. A.D. 795. Side view, west. Brown sandstone. H: 73" x L: 98". Nitrate negative 41980 by Alfred P. Maudslay. © 1994 photograph courtesy Southwest Museum, Los Angeles, California. (Bottom) **Monument 16**. Quirigua. A.D. 795. Back view. Brown sandstone. H: 73" x L: 98". © 1994 photograph courtesy San Diego Museum of Man, San Diego, California.

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Writing a Story About Art

Pictured on the next few pages are drawings of Monument 2 of Quiriguá. These drawings are reproduced on these pages as resources for writing. While the drawings are works of art in themselves, it is hoped students studying these drawings as writing resources will help them look, explore, and think about Maya art.[1] The special foci of this writing lesson are glyphs from the back view of Monument 2 .

Directions:

Show the students photographs of the monument on pages 150-151 and describe how it fits into the history of Classic Maya art forms. Provide the students with copies of the four pages of drawings over a series of days, or present them as a group project.

a. distribute all the drawings as an individual assignment, or

b. distribute copies of one drawing to members of one group. Everyone in the group gets the same drawing and contributes to the discussion collectively.

Art as a Writing Resource[2]

1. List all the details (10 minutes)

   List all the things that are visible. Go beyond the subject matter. Describe the lines, shapes, and textures. Do not include your emotions or reactions. List all the things that are *not* visible. Is a burden covering a man's arm or shoulder? Is image clarity and organization missing?

2. Write a short description of the sculptural images (10 minutes).

   Provide information, but withhold all judgments. Write so that a reader could instantly recognize the work.

3. Sharing description (20 minutes)

   Listen for details you remember from the description. What comments if any were added that were not just descriptions? Did the description include more than just the subject matter of the drawings?

4. Writing a story about one frame (15 to 20 minutes).

   Tell the story of the action taking place. What do you think has just happened or is about to happen? Describe what the artist had to do to make the action visible (e.g., overlapping forms).

5. Write the "whole story" visible on this side of the monument.

   Tell the whole enlarged story. Describe how the frames fit together and how they fit within the framework of the monument. Give the setting for the monument; describe the characters and brainstorm other aspects of the story development.

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[1] Thomas E. Lowderbaugh, *Collecting Their Thoughts: Using Museums as Resources for Student Writing* Washington, D.C.: Smithsonian Institution, 1994.

[2] Jeff Miner in Thomas E. Lowderbaugh, *Collecting Their Thoughts: Using Museums as Resources for Student Writing* Washington, D.C. Smithsonian Institution, 1994 p. 21.

El arte como fuente de redaccion[1]

1. Enumere todos los detalles (10 minutos)

   Enumere todo lo que está a la vista. Elabore sobre el tema. Describa las líneas, formas y texturas. No incluya sus reacciones ni sus opiniones.

   Enumere todas las cosas que no están a la vista. ¿El fardo lo carga el hombre sobre su brazo o sobre su hombro? ¿Falta organización y nitidez en la imagen?

2. Redacte una breve descripción de las figuras que aparecen en las esculturas (10 minutos)

   Exponga la información sin expresar sus opiniones. Escriba de tal forma que la obra sea reconocida de inmediato.

3. Comentario (20 minutos)

   Tome nota de los detalles expuestos en la descripción. ¿Que comentarios han sido añadidos que no forman parte de la descripción? ¿Hubo detalles aledaños al tema en la descripción de los dibujos?

4. Describiendo la escena de un cuadro (15 a 20 minutos)

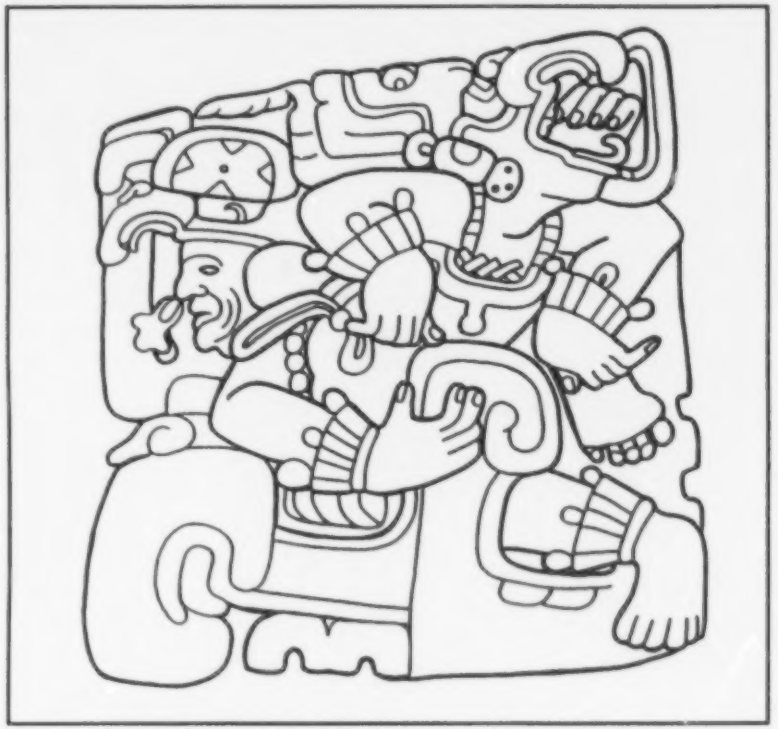
   Relate lo que sucede en el dibujo. ¿Que piensa Ud. que acaba de pasar o va a suceder en cualquier momento? Describa que tuvo que hacer el artista para mostrar movimiento (ejemplo: sobreponiendo imagenes).

5. Escriba "toda la historia" visible de este lado del monumento.

   Narre la historia completa. Aporte detalles de las imagenes en su conjunto y cómo caben éstas en el entorno del monumento.

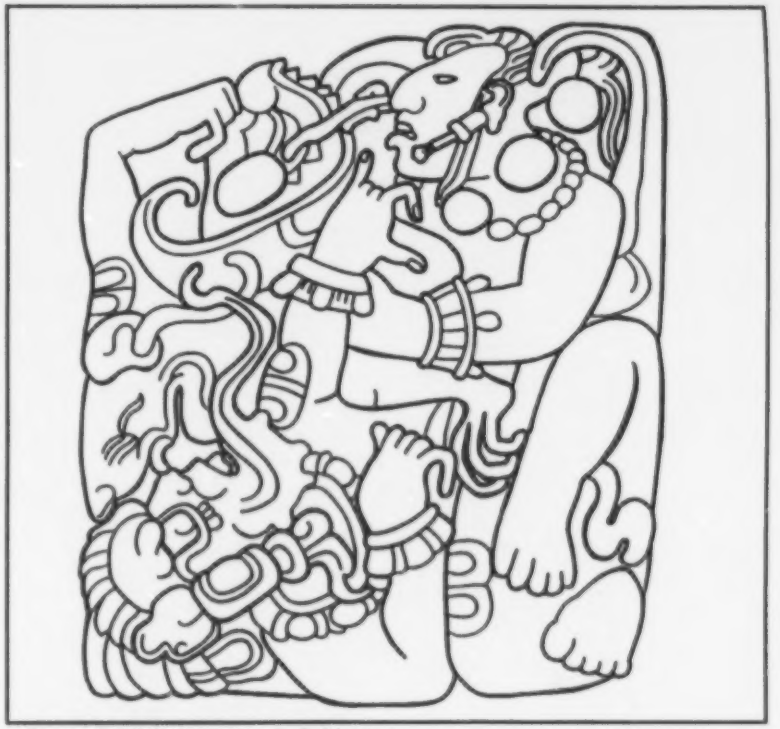
   Describa la ubicación del monumento; describa los protagonistas y elucubre sobre otros aspectos del desarrollo temático.

[1] Jeff Maser en *Collecting Their Thoughts: Using Museums as Resources for Student Writing* de Thomas E. Lowderbaugh, Washington, D.C. Smithsonian Institution, 1994 p. 21



Drawings 7-8 from Monument 2, Quiriguá

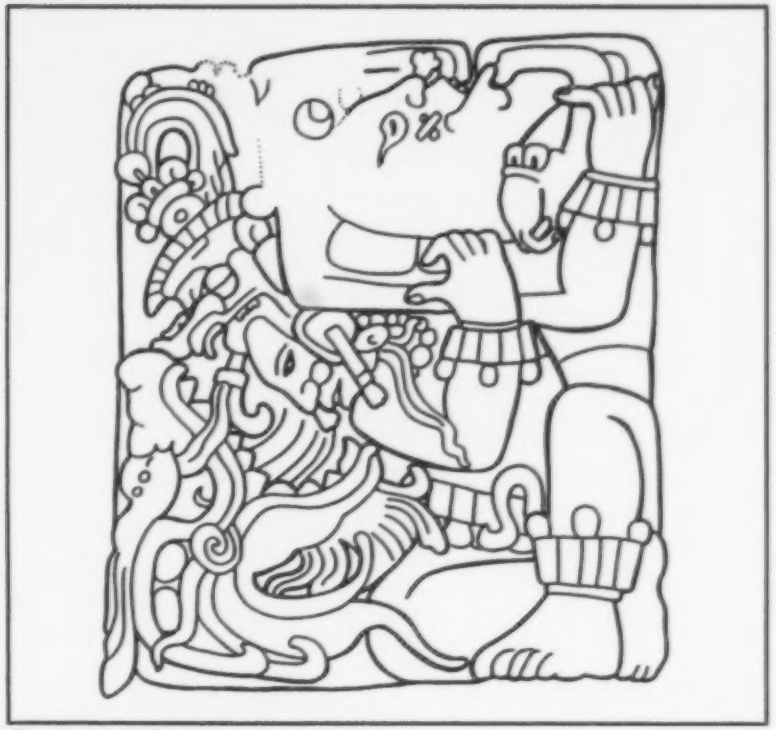
List the Details (in both drawings)[1]
• Enumere los detalles (en ambos dibujos)[2] •



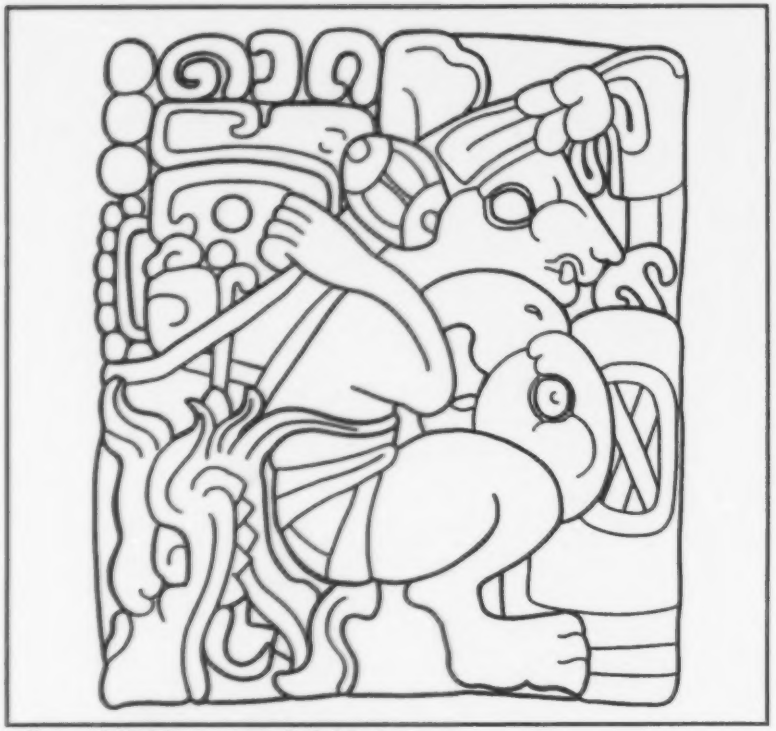
• Figuras 7-8 del monumento 2, Quiriguá

Write A Short Description
• Describa los dibujos brevemente •

[1]Reproduced with permission of the artist Matthew G Looper [2]Reproducidos con el consentimiento del artista Matthew G Looper



Drawings 9-10 from Monument 2, Quiriguá

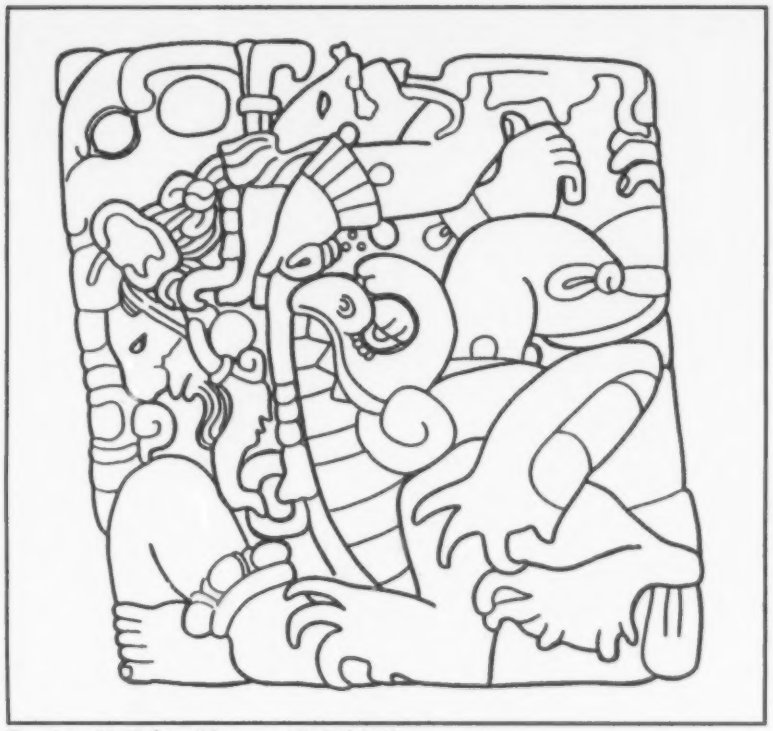


• Figuras 9-10 del monumento 2, Quiriguá

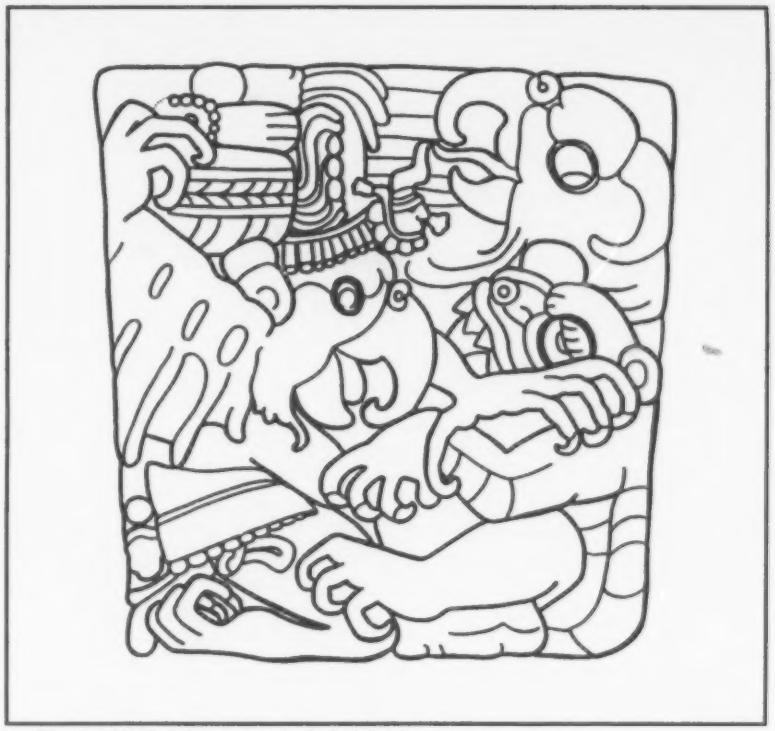
List the Details (in both drawings)[1]
• Enumere los detalles (en ambos dibujos)[2] •

Write A Short Description
• Describa los dibujos brevemente •

[1]Reproduced with permission of the artist Matthew G Looper [2]Reproducidos con el consentimiento del artista Matthew G Looper



Drawings 11-12 from Monument 2, Quiriguá

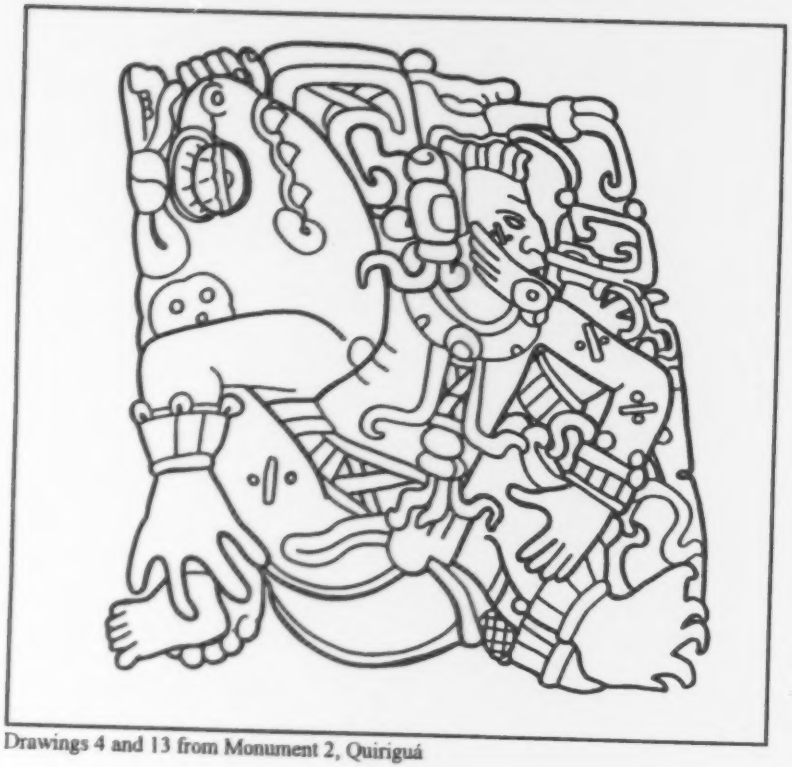


• Figuras 11-12 del monumento 2, Quiriguá

List the Details (in both drawings)[1]
• Enumere los detalles (en ambos dibujos)[2] •

Write A Short Description
• Describa los dibujos brevemente •

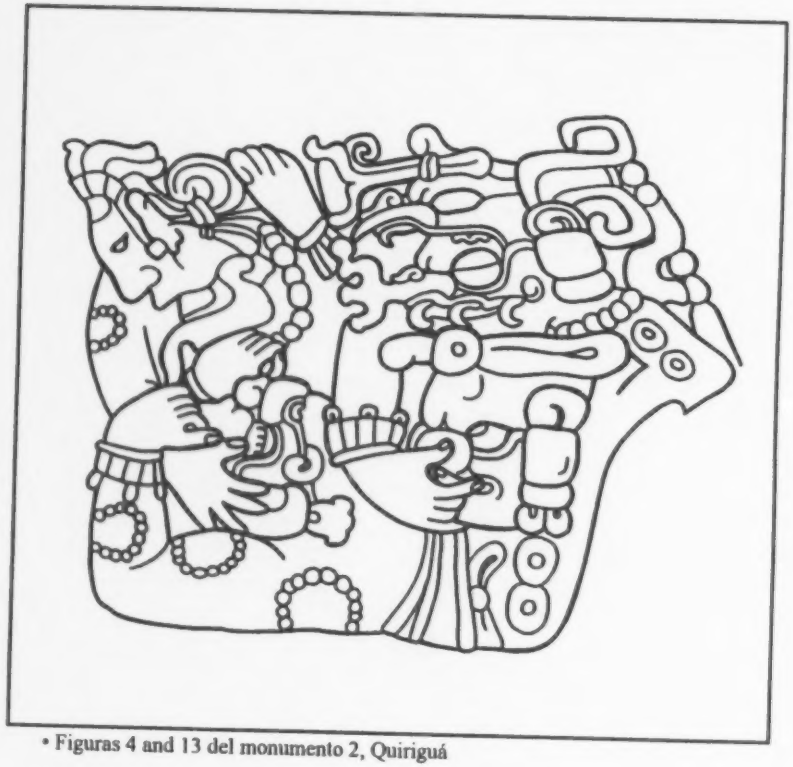
[1]Reproduced with permission of the artist Matthew G Looper [2]Reproducidos con el consentimiento del artista Matthew G Looper



Drawings 4 and 13 from Monument 2, Quiriguá

List the Details (in both drawings)[1]
• Enumere los detalles (en ambos dibujos)[2] •

[1]Reproduced with permission of the artist Matthew G. Looper [2]Reproducidos con el consentimiento del artista Matthew G. Looper



• Figuras 4 and 13 del monumento 2, Quiriguá

Write A Short Description
• Describa los dibujos brevemente •

Communications about Maya Communications
(Part I)

The illustrations in these next few activities are examples of Maya text in the form of glyphs. A student's first response to Maya communications in the form of pictorial glyphs may be attention deficient. There may be so much to look at in each glyph that the perception is blurred. The first tendency a student might have is to just sweep over the imagery.

In this series of exercises, pairs of students work together, with a physical barrier set up between them, in order to reduce impulsivity and random search, and to increase their skills in communication. This first activity is short, and leads into parts two and three, which will take more thought and skill.

Materials:
Give each pair of students a set of materials to practice their strategies and communications skills and to develop their understanding of positions in space.

- a barrier (e.g., a clip board or other object) to prevent the students facing each other, seeing what one's partner has in front of him/herself.
- Stone's drawing of Monument 2 at Quiriguá and Looper's unmarked glyphs
- Looper's drawings of glyphs with marked positions.
- photographs of Monument 2 from different views
- signs or hats marked "sculptor" and "ruler" or "patron"

Directions:
1. In this first activity, Partner "X" (the sculptor) will be exchanging information with Partner "Y" (the ruler or patron). The ruler will be explaining to the sculptor where he wants glyphs carved on the Monument dedicated to his ancestors. Distribute the signs or hats.
2. Show the students photographs of Monument 2 from Quiriguá. Point out the sections on the Monument where glyphs have been carved. Explain how the Maya carved their communications in pairs and read from left to right, top to bottom.

1st Glyph	2nd Glyph
3rd Glyph	4th Glyph

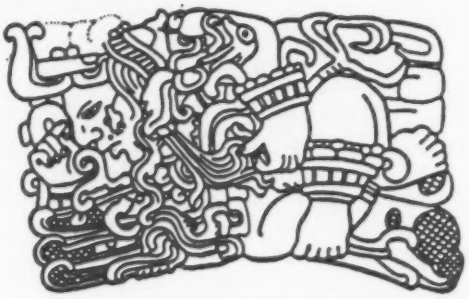
Have the students give some ways they would tell someone how to identify precisely the positions each of these glyphs have: upper left, upper right, lower left, and lower right. Have them suggest strategies for discussing these glyphs:

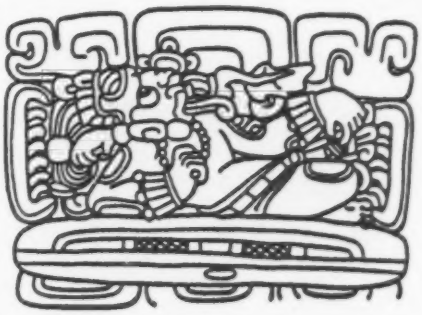
a. clockwise
b. from right to left
c. from top to bottom

3. Following the discussion, have students set up their barriers, and divide up the materials.
4. To all the patrons in the room, give them Looper's drawings of glyphs with marked positions.
5. To all the sculptors in the room, give them Stone's drawing of Monument 2 at Quiriguá and Looper's unmarked glyphs. Give one more glyph than necessary to each partner so there will always be a choice.
6. "Walk the students through" the description of the first glyph to check for their understanding of the assignment. Use a commentary something like this:

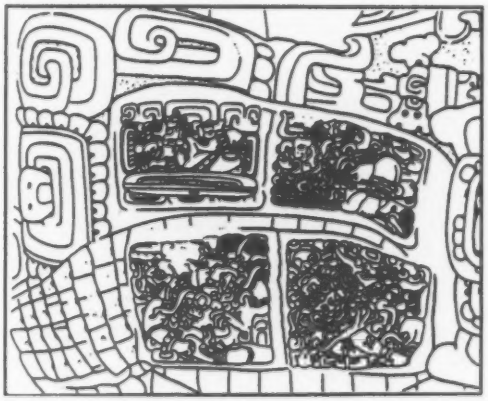
Communications about Communications

The patron might begin by saying, "Would you please carve four glyphs in four rectangular spaces on the monument for me? I want the glyph in the upper left to have a figure lying down."
The sculptor might ask, "Do you want the figure lying down on his back facing upwards, or lying on his stomach facing downwards?"



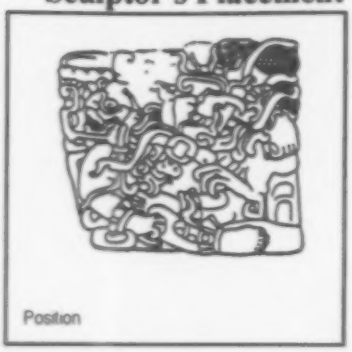


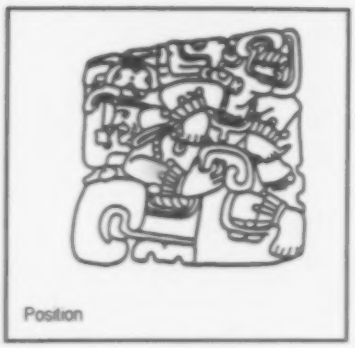
When you are satisfied the students have identified the correct glyph desired by the patron, and the sculptor has correctly marked the position under the glyph "upper left," have the students proceed to identify the next three glyphs in the same manner. There will be one left over so there will be a choice even when they get to the last glyph.



Sculptor's Placement

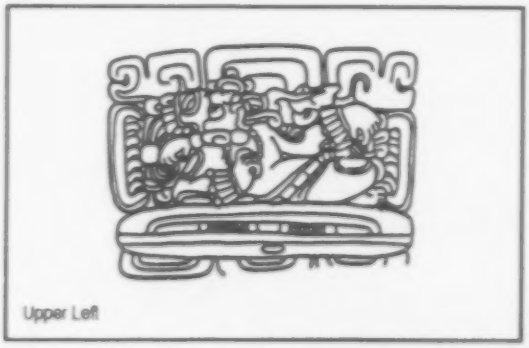
Position

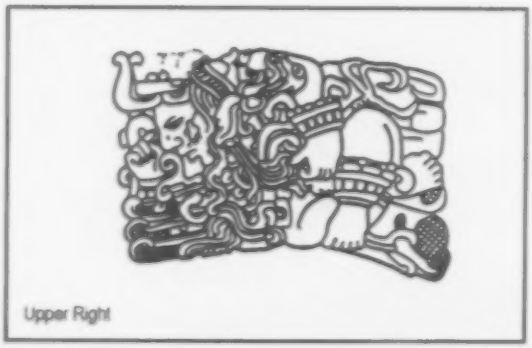

Position


Position

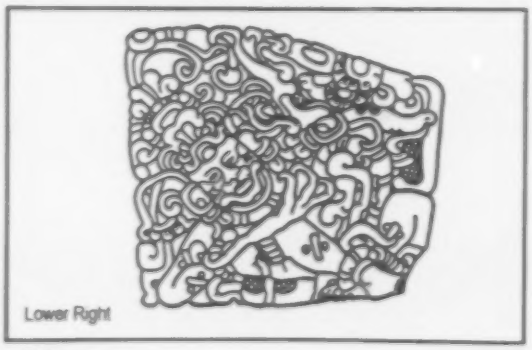
Position

Position


Upper Left


Upper Right

Lower Left


Lower Right

Patron's Ideas

Communications about Maya Communications
(Part II)

In this part of the activities, the partners study the glyphs one by one, as many as necessary to develop strategies, communication skills and to study the Maya imagery. Their strategies will now concern ways to identify positions in Euclidian space:

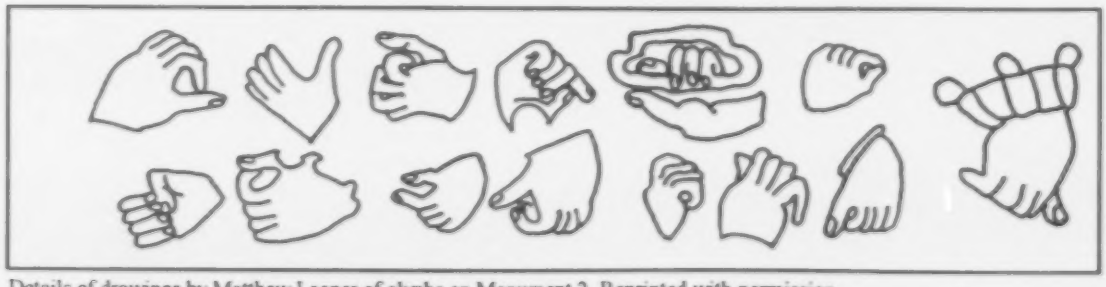
Upper Left	Upper Middle	Upper Right
Middle Left	Middle Middle	Middle Right
Lower Left	Lower Middle	Lower Right

Euclidian Space

One way to describe Euclidian space is to make a "tic-tac-toe" shape and label each space. Work with the students in developing strategies for working with and communicating about Euclidian space: 1) clockwise; 2) from outside to inside; 3) top to bottom; 4) left to right

Next work with the students in ways to describe the parts of the glyphs. Given below are some types of hands that Looper has drawn in the glyphs. Brainstorm with the students ways they might describe these hands:

1. right or left hand
2. closed hand with two fingernails showing
3. hand with gripping or pinching fingers
4. hand with fingers pointing: to the right, to the left, downwards, upwards



Details of drawings by Matthew Looper of glyphs on Monument 2. Reprinted with permission.

As in the first part of these activities, pairs of students work together, with a physical barrier set up between them, in order to reduce impulsivity and random search, and to increase their skills in communication.

Materials:

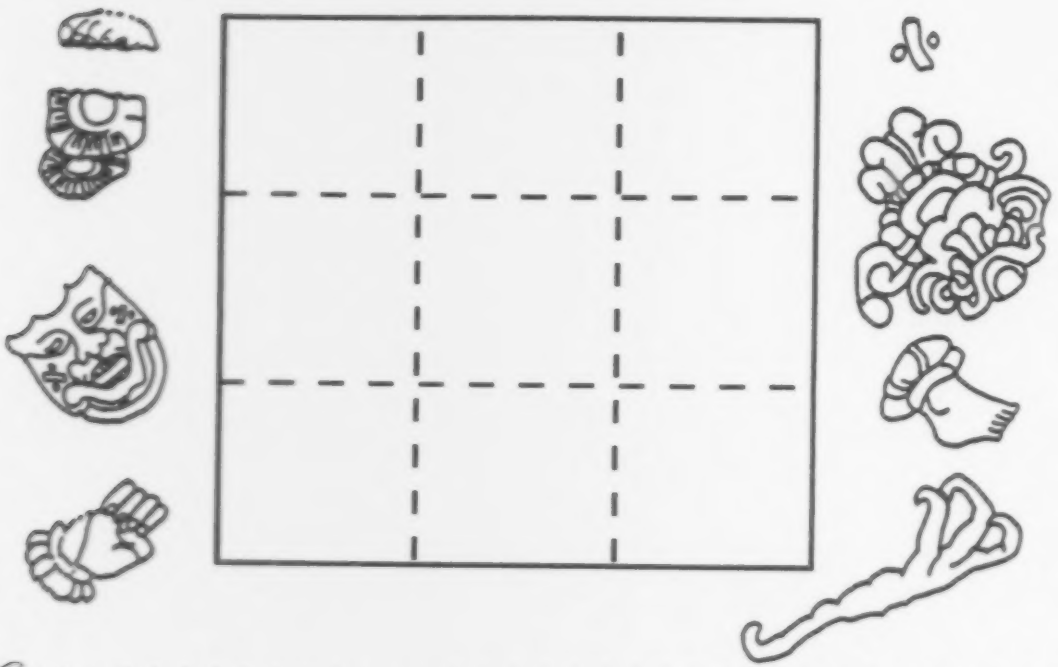
Give each pair of students a set of materials to practice their strategies, communications skills and to develop their understanding of positions in space.

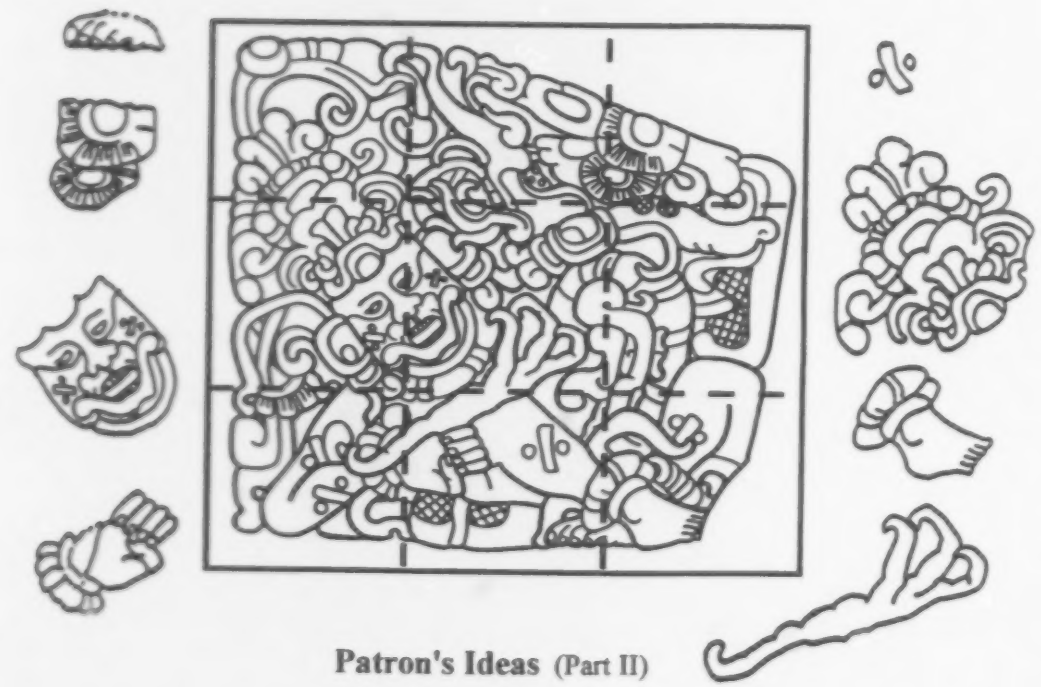
- A barrier (e.g., a clip board or other object) to prevent the students facing each other, seeing what one's partner has in front of him/herself.
- A drawing of a nine-part grid and cut outs from a glyph.
- A drawing of a glyph within a grid and cut outs from a glyph.
- signs or hats marked "sculptor" and "Ruler" or "patron"
- scissors for the sculptors
- glue for the sculptors

Directions:

1. Distribute the signs or hats. Set up the barriers. Give the patrons their materials (bottom of page 168). Ask the patrons to create descriptions for the object "cutouts" and write them down as they appear in the glyph in clockwise order, or in the order of any other strategy devised. The positions in Euclidian space should also be identified. While the patrons are doing this, the sculptors may cut out their "cut outs." Give them the top of page 168.
2. Next have the students turn their pictures over, and on the back of their lists, write down the strategy, the objects from memory, and their location in Euclidian space.Both lists should be collected before the partners begin to work together.
3. Now the partners are ready to work together. The patron begins by using precise language, and a particular strategy for systematic search: "Would you please carve a foot in the lower left corner." The sculptor might ask, "Do you want a human foot or a bird foot?" and so the questions continue until all the images are glued in place.
4. Next ask both the patrons and sculptors to write what strategy they used for systematic search and what they remember about the glyph cut outs and their positions in Euclidian space. Check the sculptors for accuracy in placement of their cutouts and compare the patrons' responses to the initial lists.You are testing the students on their ability to locate images in space.
5. Have the partners switch "careers" so the patrons become sculptors and the sculptors become patrons. Proceed to Part III and repeat the process with a new glyph.

Sculptor's Placement (Part II)

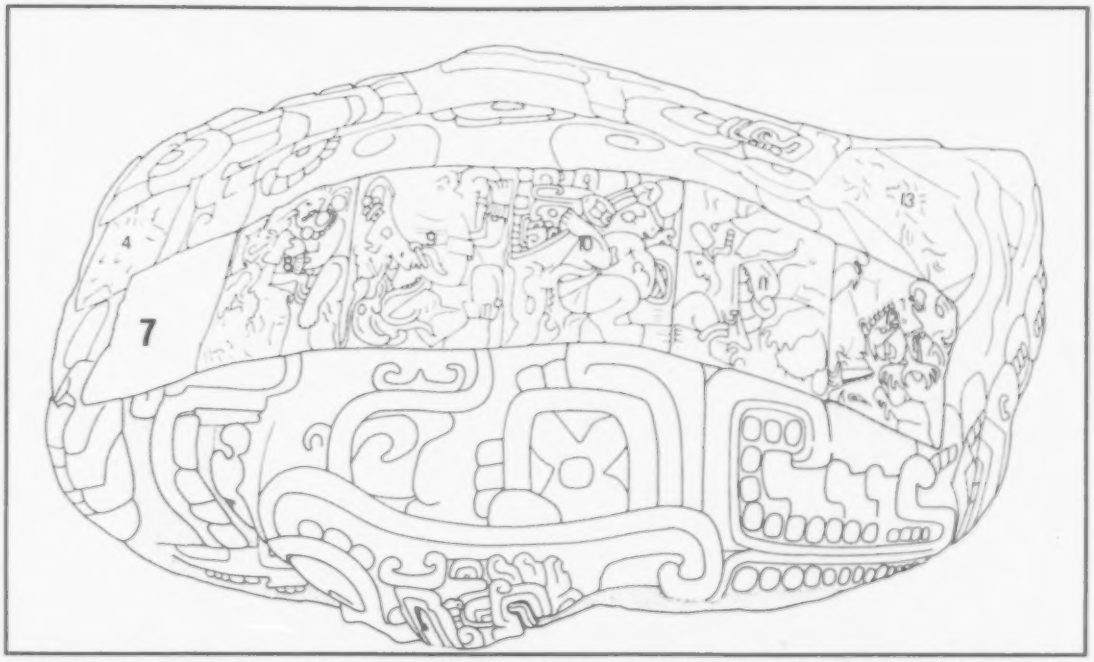




Patron's Ideas (Part II)

Communications about Maya Communications
(Part III)

After the students have completed Part II on the preceding pages, have them try this activity.

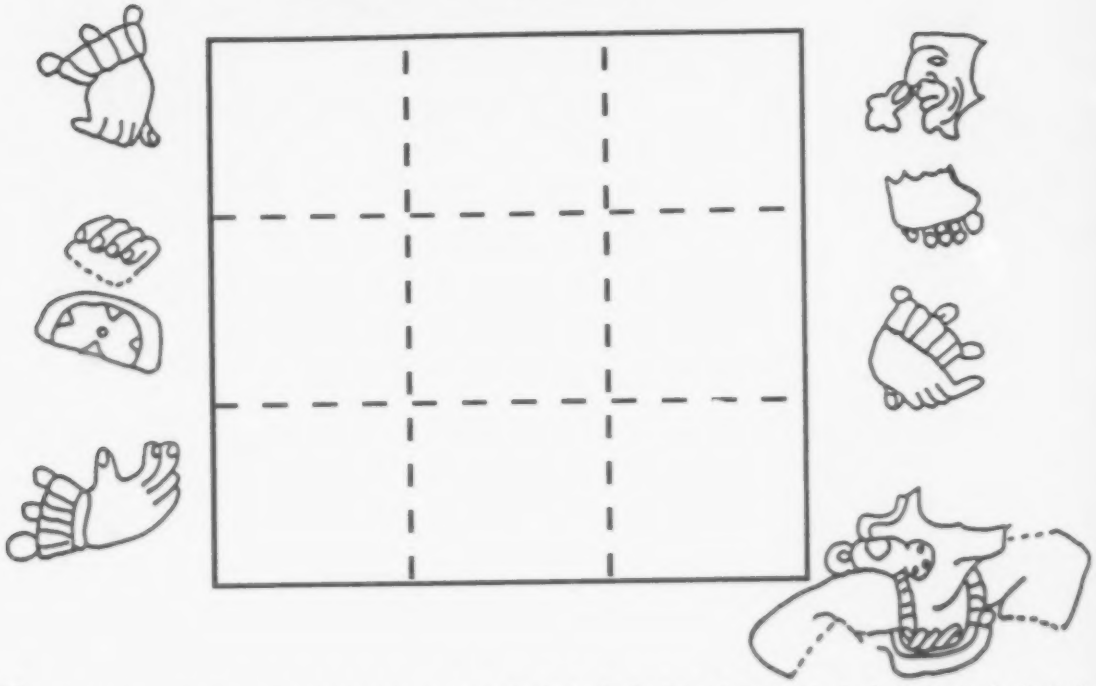


The glyph represented in this activity, drawn by Matthew Looper, is located in position 7 in Andrea Stone's drawing of Monument 2 (Quiriguá).

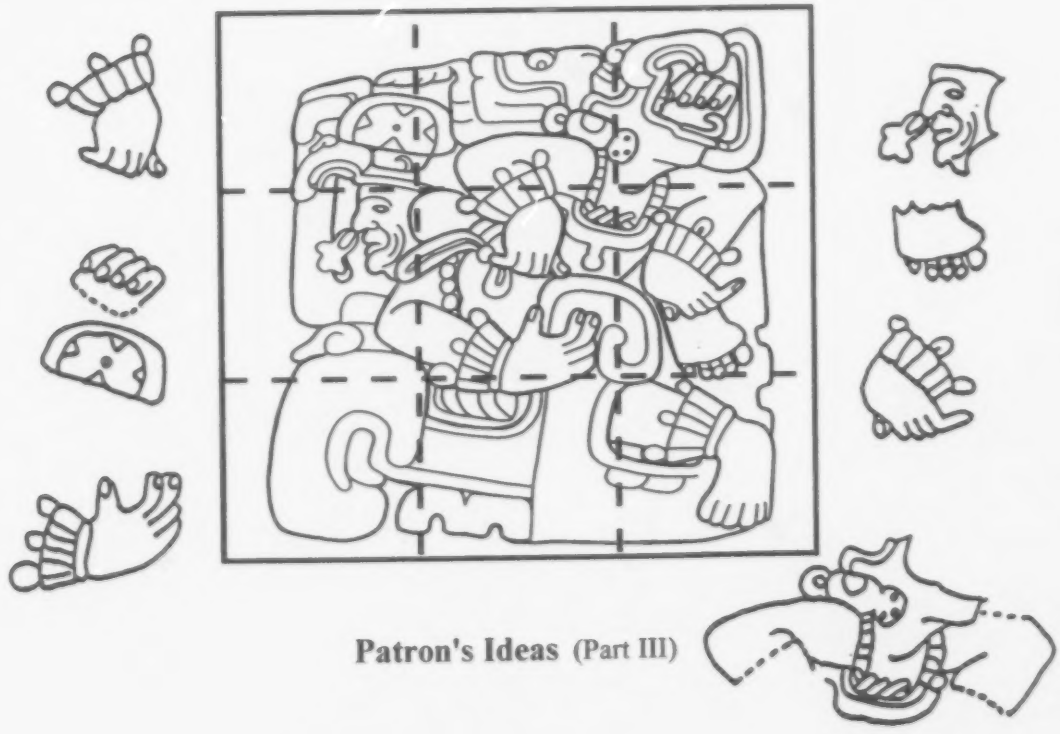
Repeat steps one and two from Part II.

3. Now the partners are ready to work together. The patron begins by using precise language and a particular strategy: "Would you please carve a hand for me in the middle middle section?" The sculptor might ask," Do you want a right hand or a left hand? How many fingernails are showing on the hand?" The questions are to continue until all the images are glued in place.
4. Next ask both the patrons and sculptors to write what strategy they used for systematic search and what they remember about the glyph cut outs and their positions in Euclidean space. Check the sculptors for accuracy in placement of their cut outs and compare the patrons' responses to the initial lists. You are testing the students on their ability to locate images in space.
5. To continue, have the partners switch "careers" and make up their own game from another glyph illustrated in this book.

Sculptor's Placement (Part III)

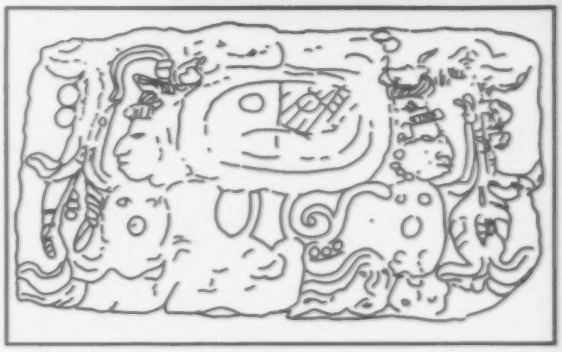


Patron's Ideas (Part III)



Flat Stone Reliefs

The Maya were masters at relief sculpture. They were able to carve complex images on both curved and flat surfaces. This section is about the flat sculptural reliefs that have been discovered.



(Top) **Relief**. Usumacinta Valley. Limestone. **Classic Maya**. A.D. 500-900. # 1985.2.24. Gift of Charles Cohn. © 1994 photograph by Art & Clarity, courtesy Mexican Museum, San Francisco, California. (Center Left) Drawing of top relief. (Bottom left) Drawing of glyph in relief on the right. (Right) **Panel with Glyphic Inscription.** Peten Region, Guatemala. Late Classic Maya: November 15, A.D. 714. H: 45" x W: 22" x D: 4". 81.80.1. © 1994 photograph by Stuart Weiner, courtesy Bowers Museum, Santa Ana, California.

Lintel with Presentation Scene. Yaxchilán-Bonampak area, Chiapas, Mexico. Painted limestone. A.D. 600-850 (Late Classic Maya). H: 35" x W: 34 ½". 1979.206. 1047. The Michael C. Rockefeller Memorial Collection, Bequest of Nelson A. Rockefeller, 1979. © 1994 photograph courtesy The Metropolitan Museum of Art, New York City, New York.

Stone Reliefs

A description of the five reliefs illustrated in the next few pages is given in the following paragraphs. Some may have been lintels and parts of architectural decoration. Some still have traces of bright paint on their surfaces. Pictorial glyphs are the subject of some of the reliefs, while narrative events may be seen in others.

Horizontal relief:

The uppermost horizontal lintel is a very symmetrical design with two heads in profile on either side of a large oval glyph-type shape. Because some of the relief has deteriorated, the most beautiful part of the sculpture may be its organization. Large and small shapes with intricate (hairdos) and simple (shield shapes) patterns, naturalistic and abstract, are brought together in a bi-lateral symmetrical pattern.

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Panel with Glyphic Inscription:

A vertical lintel with a border is not pictorial, but carved with glyphs. It has the date of November 15, A.D. 714 on it, which makes it of special historical interest.[1] Evidently the date marks an event which was performed at the beginning of the rainy season by a noble Maya lord or lady. One of the most beautiful glyphs on the relief is located about half-way through the text: a vulture head with a small vulture emerging from its beak. This glyph can function for the words "to arrive," among other meanings.[2]

The textures of the vertical relief give it an added sense of drama because it combines carefully man-made drill marks, cut lines, and the indiscriminate destruction of nature. Because of the wide border that surrounds the two columns of glyphs, we know this is a complete message.

Lintel with Three Figures:

The third stone lintel is a square lintel with a narrative theme. Three figures in profile appear in this beautiful lintel. The two standing figures face right as they approach with gifts for the seated figure on a throne. The artist has, it would appear, creatively elevated one side of the King's throne, so the royal head would be at the same level as the gift bearers. This compositional arrangement allows the traditional Maya symmetry to remain intact. It would also appear that the artist intended the large trapezoidal shape behind the king's head to serve as the balance to the guest's head on the far left.

Figures on Maya thrones are usually represented sitting cross legged, usually facing to the left. The King's body faces forward, his right leg in the foreground. Notice the way the artist has turned the King's right hand palm up to receive the gifts.

The accessories and textiles worn by the two standing figures, are handsomely decorated. Each pendant worn about their necks has a face in profile on it. Wrap-around garments, with different designs, are belted about their waists. The forward presenter wears a fringed garment with concentric cross designs on it. It is so appropriate that these two guests present a headdress to their Lord because their own headdresses are so elaborate.

The seated figure wears leg and wrist bands. An elaborate binding crosses his right arm and chest, leaving his left arm free. A long beaded-looking rope is looped around his neck, and falls down his center front, and apparently continues over his right knee.

One of the areas where the paint is best preserved on the relief is in the area of the throne. The throne cushion and legs are painted red with a dark paint (navy blue?) outline and ornamentation. The rectangular ornaments are painted with the dark paint, accented with red tassels. The dotted area under the cushion is also painted with a dark color. The rhythm of the dotted pattern on the base of the throne is fascinating as it changes from a pattern of four vertical dots on the right to six on the to help provide for the throne's balance in the elevation. Five rectangular ornaments with tassels can be seen on the throne above the dotted pattern and one on each leg. A wide rimmed bowl with at least three crescent-shaped objects is visible between the legs of the throne.

The overall look of the tactile texture on this sculpture is remarkably pleasing to the eye. There is so much variety in volume depth and shape size that one is easily engrossed in the detail. As beautiful as the sculptural work may be, the court painter did not "stay within the lines." There are several areas where the paint seems to have gone beyond its intended boundaries. The

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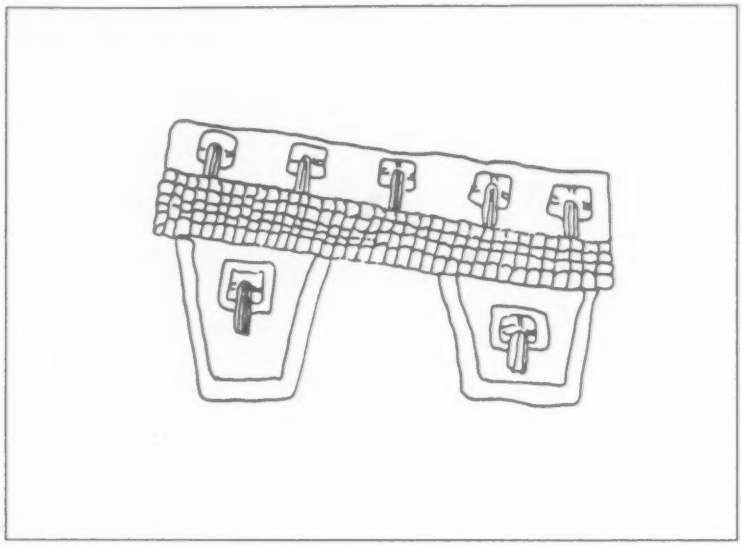
[1] Not everyone agrees on how to translate the dates in Maya glyphs to those in the Julian calendar. This date was translated by Dieter Dutting, renowned epigrapher and Mayanist.

[2] Armand J. Labbé. *Religion, Art, and Iconography: Man and Cosmos in Prehispanic Mesoamerica.* Santa Ana: Bowers Museum Foundation 1982. p. 40.

background or the plain part of the relief is painted red. The paint goes right over the glyphs. An understanding of the glyphs above the Lord's head, and by his right arm, will no doubt enhance the aesthetic experience.



Relief with Noblewoman:

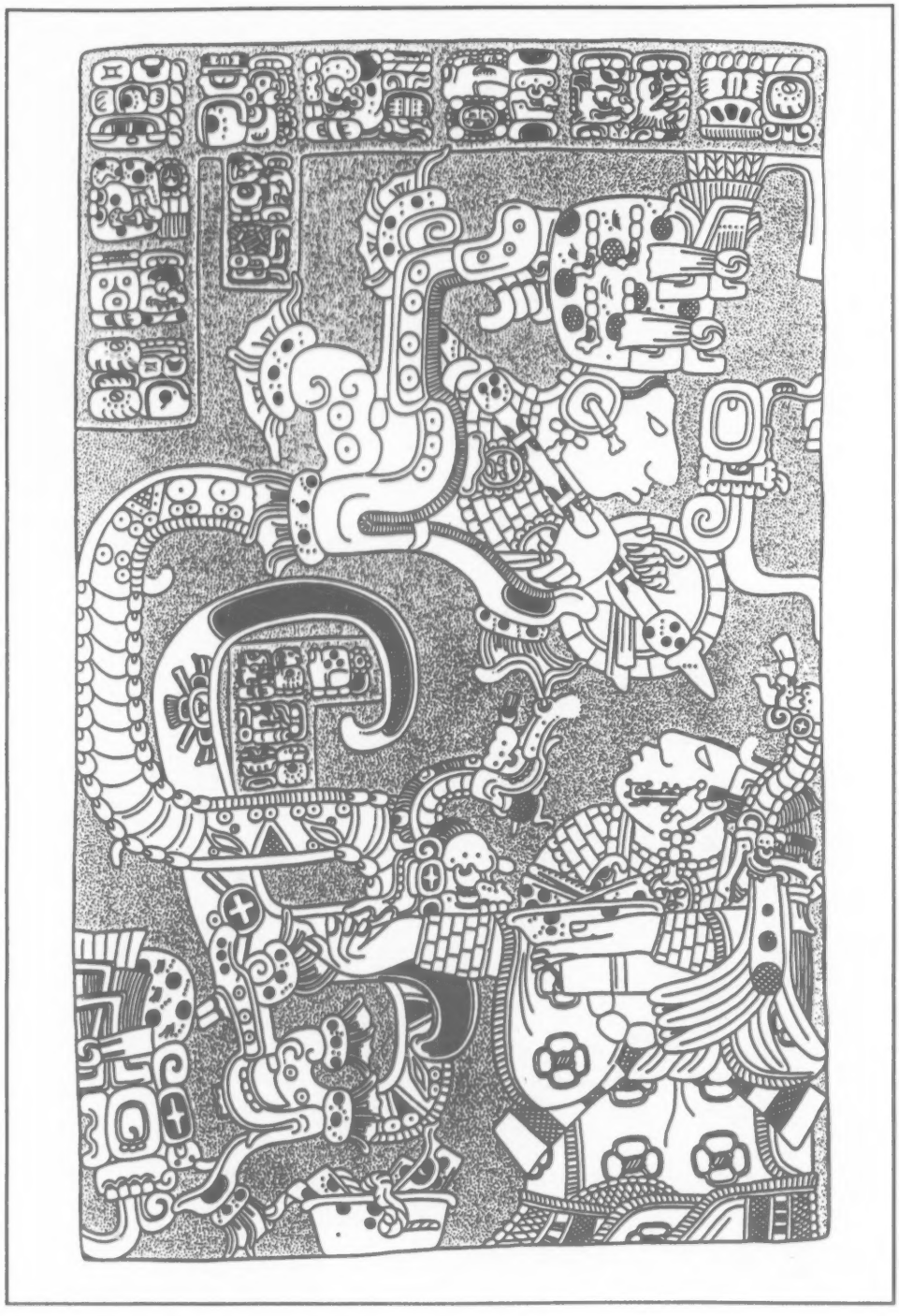
A mottled golden color is the basic color of this stone relief carving. Traces of blue-green and earth-red paints appear throughout, adding to the exciting appearance of the composition. The seated woman, her body frontal, but her head facing right, is seated within a crescent-shaped enclosure identified as the emblem glyph for Yaxchilán. This hieroglyphic inscription names her a member of a royal family at the city. Beautifully attired in a long gown with trimmed edges, she has one of the most magnificent feather headdresses. Strand upon strand of beads and a mask-like pendant appear to be carved on the exact bilateral axis of the relief. Her feet, hands, even fingernails, are carved with great detail and understanding of foreshortening and perspective.

Ballcourt Panel:

The detail in this sacred landscape with a fallen ball player is consistently beautiful throughout. The smooth plain background makes a great foil for the players in their richly decorated costumes and the pictorial glyphs. The diagonal position of the fallen figure's forearms is one aspect of the dramatic composition. Another is the weight given to the scene that seems to defy gravity: large glyphs overhead and a large round suspended shape near the player's head. The terrible position of the fallen player, his right leg twisted as if broken, gives further tension to the scene. A small skull worn as a pendent by his opponent suggests the dark outcome, too. Notice how effortlessly the standing figure appears to flick the ball with his fingers.

(Top) **Maya Noblewoman.** Limestone. Maya. Yaxchilán, Chiapas, Mexico. 8th century A.D. H: 27½" x W: $34^{5}/_{16}$". Purchased with funds provided by Shinji Shumekai Ancient Art Fund and Joan Palevsky. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California. (Bottom) **Ballcourt Panel**. Limestone. Mexican or Guatemalan, Usumacinta River Area, Late Classic Maya Culture. A.D. 650-800, H: 25 cm. x W: 3.5 cm. © 1994 photograph by Robert Hashimoto in raking light. Ada Turnbull Hertle Fund, 1965.407. Photograph courtesy The Art Institute of Chicago, Chicago, Illinois.

Yaxchilán Lintel 25[1]

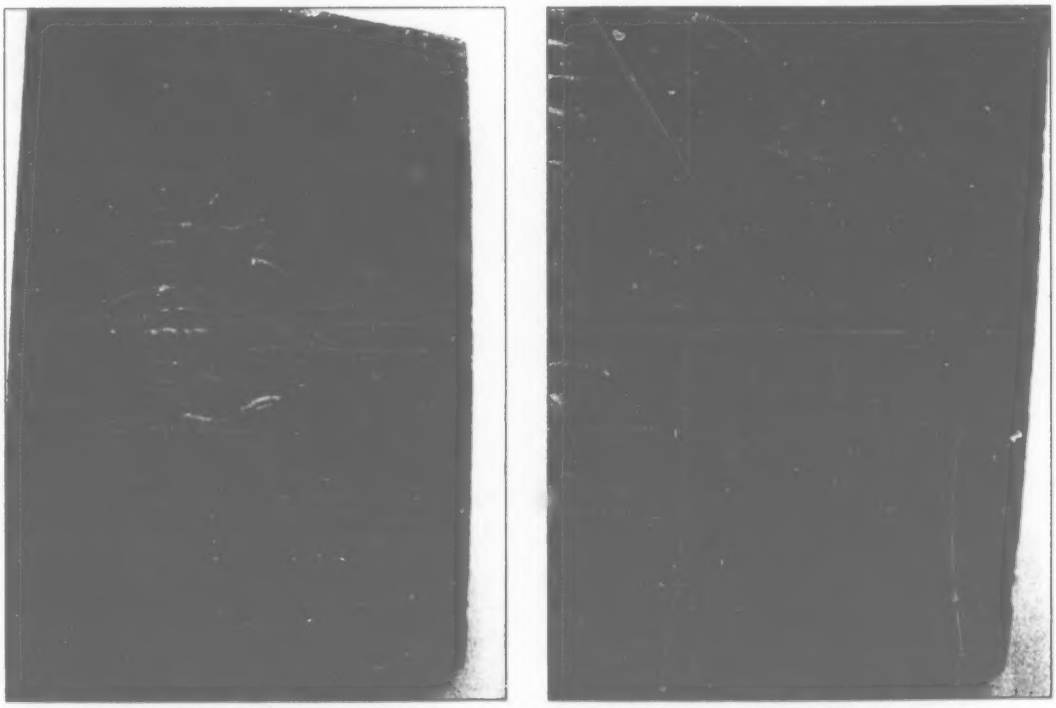


[1] Drawing by Ian Graham. Courtesy Peabody Museum, Harvard University, Cambridge, Massachusettes.

Lady Xoc and Yat Bala

This carved relief is one of three lintels created to celebrate Lord Shield Jaguar's accession to the throne in October 23, A.D. 681. The subject matter is a ritually induced hallucinatory vision. The ecstatic trance in this case was probably attained through severe physical trauma using the blood-letting ritual.[1] This Maya site is the only place where associations of blood-letting are presented in Maya art with such matter-of-fact presentations.[2]

At Yaxchilán the direct representations of visionary and penitential rites are unique. Both types of subject matter were carved on over-door lintels. In this vision, Shield Jaguar's principal wife, Lady Xoc, gazes upward at an apparition of the Jaguar Dynasty's founder Yat Bala. The upper body of Yat Bala is emerging from the open jaws of a serpent whose lower body rises in coils from a bowl on an altar. The writhing body of the serpent surges upward through a "blood scroll," signalling that the vision materializes from blood. Lady Xoc's left hand holds the implements which induced her vision (a sting ray spine and an obsidian lancet) and a blood-letting bowl filled with blood-spattered paper. In her right hand are a skull and serpent symbol.

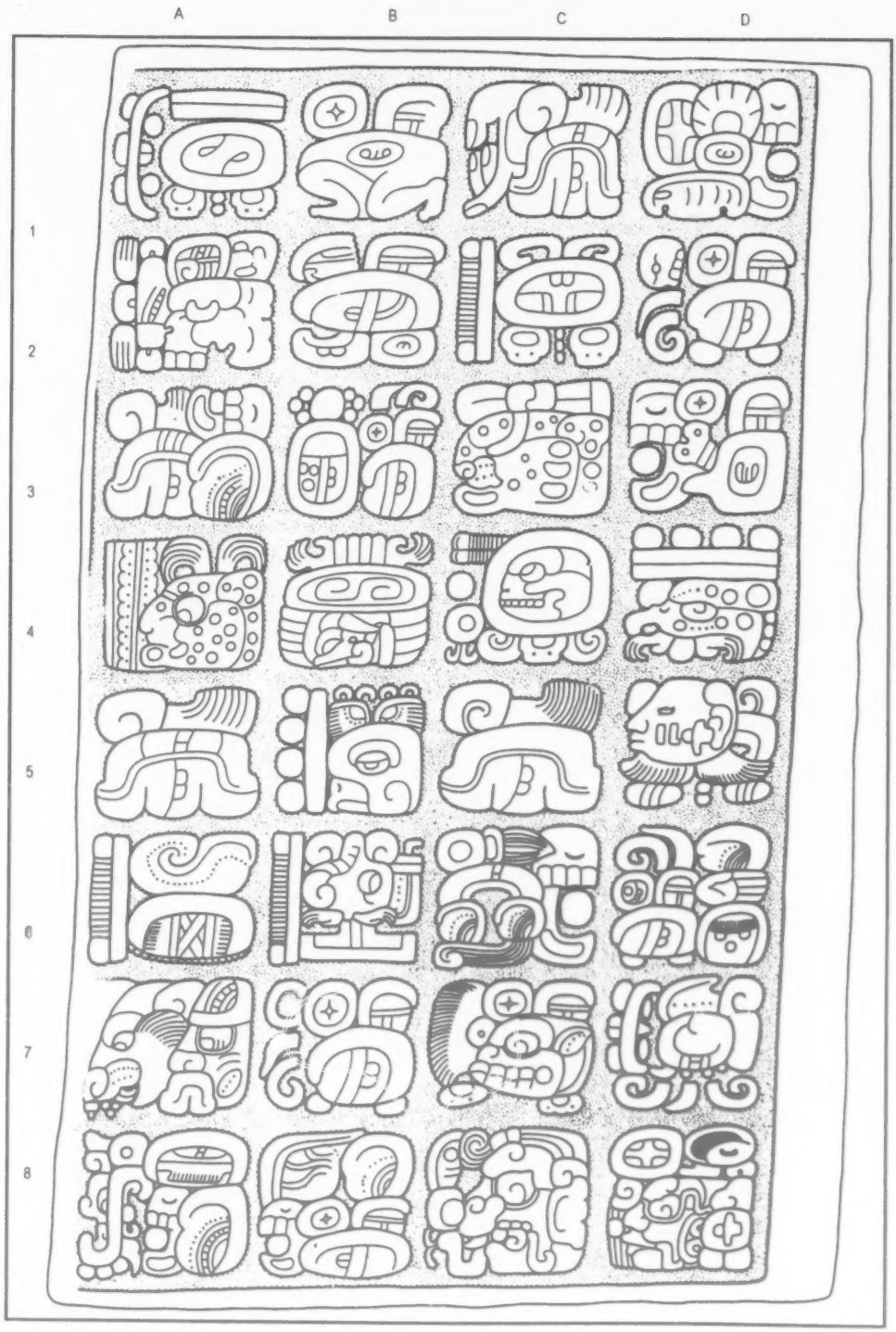


Cast of Limestone Lintel 25. Structure # 12. Yaxchilán. Photographs of the cast and detail of lower corner by Ann Fuerst, courtesy of San Diego Museum of Man, San Diego, California.

[1] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 258.

[2] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 258.

Yaxchilán Lintel 35[1]



[1] Drawing by Ian Graham. Courtesy Peabody Museum, Harvard University, Cambridge, Massachusettes

Yaxchilán Lintel Puzzle

This interesting panel rhythmically patterned with hieroglyphs is one of eight from structure # 12 at Yaxchilán. The 32 glyph shapes are flat with very little modeling. Incised lines and shallow drill marks give a special texture to the glyphs raised against a plain background.

This panel is part of a series of eight panels found in one building. It is the only panel illustrated in this book. The eight panels tell the history of the 10 kings of the Jaguar Dynasty at Yaxchilán. The seven others which are not illustrated tell the history of the first nine kings. The series presents a list of 10 kings with names "of distinguished visitors who witnessed... the succession of each."[1] The panel in this book[2] tells of the events in the life of the tenth king, Lord Yax-Skull. The date, 1 Cimi, 14 Muan (January 20, A.D. 536) refers to an event—probably a war—which took place following "Mahk'ina Skull II's" accession to the throne.

Study the 32 gylphs that are pictured in your History-Social Studies text and compare with the glyphs and drawing by Ian Graham.[3]

Civilization Puzzle

Find the glyphs that have been identified below on the Yaxchilán panel. Cut out the glyphs and arrange in order in parallel passages. Make a statement in your own words. If this were the only information ever found from this civilization, describe what this culture must have been like, based upon these names and the appearance of the panel as art.

Yaxchilán Emblem Glyph

"Descending-Bird I"

10th in Succession

"his lord" (?)

"Knot-eye-Jaguar"

Royal Accession

"Mahk'ina Skull II"

Bonampak Emblem Glyph

Unknown foreign Polity

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[1] Ian Graham, personal communication (September 1, 1994) about possible meaning.
[2] Lintel 35 from Structure # 12.
[3] Drawing by Ian Graham. Courtesy Peabody Museum, Harvard University. A color photograph of the relief is illustrated on page 408 in the 7th grade student text by Beverly J. Armento, et al., *Across the Centuries*, Boston: Houghton-Mifflin. 1991.

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Enigma del dintel de Yaxchilán

La estructura número 12 de Yaxchilán tiene ocho cuadros, uno de los cuales, reproducido aquí, tiene un interesante patrón rítmico de jeroglíficos. Los 32 glifos son planos con poco relieve. Las líneas incisivas y agujeros poco profundos le dan una textura singular a estos glifos realzados sobre un fondo liso.

Este es uno de los ocho cuadros que se encuentran en un edificio. La serie enumera 10 reyes y sus nombres "de visitantes distinguidos que presenciaron...la sucesión de cada uno de ellos." [1]

Los ocho cuadros narran la historia de 10 reyes de la dinastía del jaguar de Yaxchilán. Los otros siete narran la historia de los primeros nueve reyes. Este cuadro [2] narra los acontecimientos ocurridos durante la vida del décimo rey, el Señor Yax-Skull. La fecha, 1 cimi, 14 muan (20 de enero de 536 D.C.) se refiere a un acontecimiento—probablemente una guerra—que sucedió después de que Yax-Skull subiera al trono.

Examine los 32 glifos que aparecen en su libro de texto de historia y ciencias sociales y compárelos con los glifos y el dibujo de Ian Graham.[3]

Enigma de la civilización

Encuentre los glifos que se hallaron en el cuadro de Yaxchilán. Recorte los glifos y ordénelos en series paralelas. Escriba una relación, en sus propias palabras. Si no se descubriera nunca ninguna otra información sobre ésta civilización, ¿cómo describiría Ud., a esta cultura, apoyándose en estos nombres y la perspectiva artística del cuadro?

glifo del emblema de Yaxchilán

pájaro descendiendo "I"

10° en la sucesión

"su majestad" (?)

jaguar del ojo anudado

advenimiento real

"Mahk'ina Skull II"

glifo del emblema de Bonampak

comunidad extranjera desconocida

[1] Ian Graham comunicación personal (9/1/94) sobre el posible significado.
[2] Lintel 35 de la estructura # 12
[3] Dibujado por Ian Graham. Cortesía del Peabody Museum, Harvard University. Fotografía a color del relieve reproducida en la pag. 408, en el libro de texto Houghton-Mifflin del 7° año escolar.

Name_____ Date_____

Parallel Glyph Passages

One way scholars work with the messages of Maya glyphs is to sort the glyphs into parallel passages.[1] Use the table below to arrange the glyphs and parts of glyphs found on lintel #35. What does this arrangement tell you about the way the Maya carved and read their glyphs?

Series 10	nth succession	(to) royal accession	name	Emblem Glyph		name			title		name		foreign Emblem Glyph			
	A1	B1	A2	B2	C2a	C2b		B3a		B3b	A4	B4				
					A5	B5	A6	B6	A7	B7	A8	B8				
					C1	D1		C2		D2	C3		D3			
C4	D4				C5	D5		C6		D6a	D6b		C7	D7	C8	D8

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[1] Based on the table provided in Peter Mathews Ph.D. dissertation.

Nombre_____ Fecha_____

Episodios de glifos semejantes

Algunas veces los científicos estudian los significados de los glifos mayas clasificándolos en episodios semejantes.[1]
Use la siguiente tabla para clasificar los glifos del dintel #35. ¿Qué le dice esta clasificación sobre la manera que esculpían y leían los glifos los mayas?

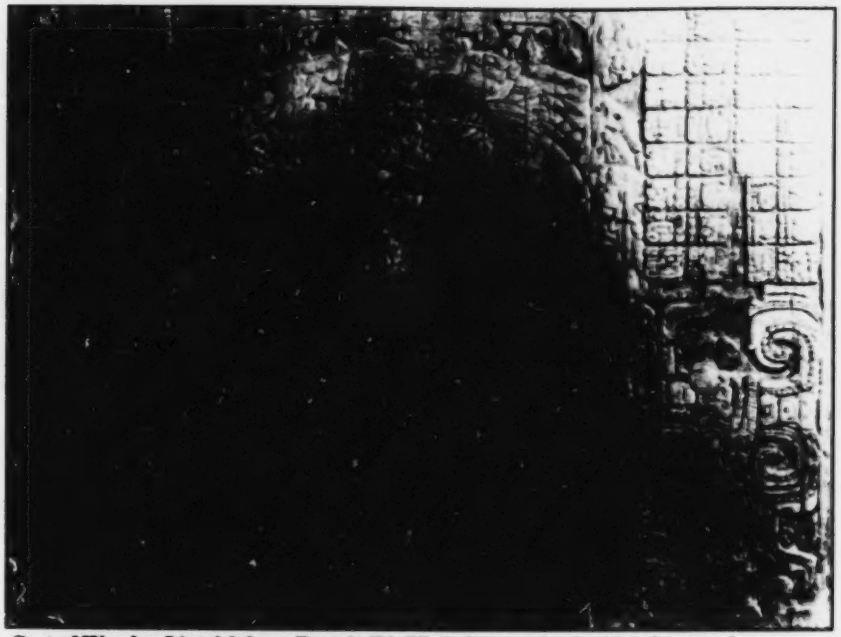
Series 10		# sucesión	advenimiento	nombre	glifo del emblema		nombre			título		nombre		emblema de la comunidad extranjera			
		A1	B1	A2	B2	C2a	C2b	B3a		B3b		A4	B4				
						A5	B5	A6	B6	A7	B7	A8	B8				
						C1	D1	C2		D2		C3		D3			
C4	D4					C5	D5	C6		D6a		D6b		C7	D7	C8	D8

182

197

193

[1] Basado en el la tabla que se encuentra en la tesis de Peter Matthews.



Cast of Wooden Lintel 3 from Temple IV. Tikal, Guatemala. © 1994 photograph courtesy San Diego Museum of Man, San Diego, California.

Wooden Sculpture

Wood used by the Maya in carving included sapote, from which chicle as in chewing gum was harvested. Pictured above is the third wooden lintel relief from Temple IV at Tikal. The carving depicts a richly costumed figure sitting beneath the arched body of a magnificent feathered serpent. The rhythm in the sculptural relief compositions of artists from Tikal has been labeled ponderous by one scholar. He believes the overwhelming look is a result of the emphasis on the two-dimensional in the artist's relief work. Very little is done to give the relief a three-dimensional quality.[1] Spinden reports the wooden reliefs were generally on the underside of a lintel, so they could not be viewed easily.[2]

The seated figure has a frontal posture, legs open, legs and feet pointing outwards.[3] His elaborately dressed head faces to the left. His left hand is gently curled (grasping?) and resting upon the Lord's knee. The right hand steadies a decorated staff. A deity emerges from the open jaws of a spoted serpent. The serpent's body appears to loop up and over the seated figure. Perched on the serpent is a mythical bird monster.

At the top of the relief, on either side, panels of glyphs are carved into position. While not equal in size, they give a strong pattern of verticality which emphasizes the grain of the wood.

The style of this monument is different from other Maya sites because "Tikal sculptors never investigated the possibilities of relief rounded in depth; their work always adhered to close set front and rear planes, separated by vertical-wall cuts, and differentiated by linear incision." Two-dimension extension was preferred to effects in depth.[4]

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[1] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 251.
[2] Herbert J. Spinden, *A Study of Maya Art*. New York: Dover Publications. 1975. p. 116.
[3] Only one leg is visible, but since the heel of the right foot mirror's the left, it is assumed by this writer that the left leg does the same.
[4] George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 251.

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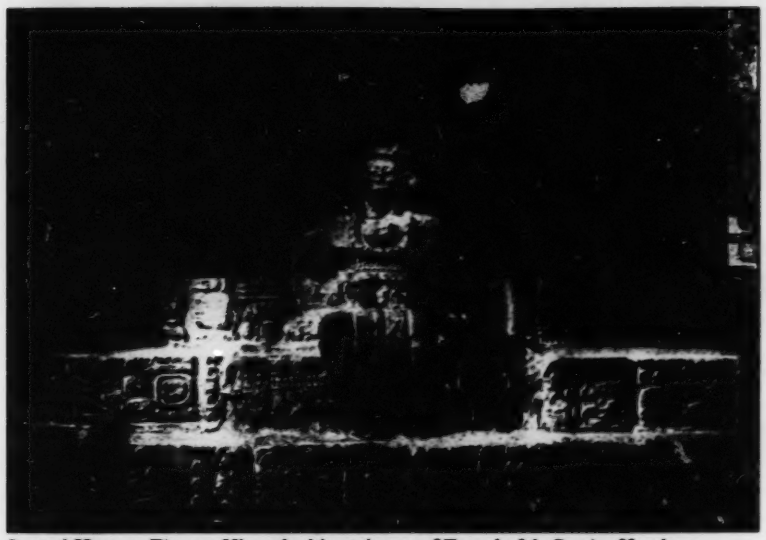

Seated Human Figure. Hieroglyphic stairway of Temple 26. Copán, Honduras. Maya, Late Classic. A.D. 750-800. NZ6827. © 1994 photograph by Hillel Burger, courtesy Peabody Museum, Harvard University, Cambridge, Massachusetts.

The Hieroglyphic Stairway at Copán

Scaling the pyramid of Temple 26, the hieroglyphic stairway at Copán (next to the ballcourt), is 30 feet wide and 63 steps high. Each block—there are more than 12,250 of them—is inscribed with a separate hieroglyph, making this the longest ancient text yet found in the New World. The text is found on the risers of the stairway. The masonry at Copán was bonded with mud, not lime cement.[1] The dates of the glyphs range from A.D. 553 to 751. A ruler named Smoke Shell commissioned the structure to honor his dynastic ancestors after Ruler 18 Rabbit was killed by his enemies.[2] There are five great figures seated along the center of the stairway. This is the sixth.[3]

Seated on a special throne mounted on the steps, in magnificent regalia, the youth confidently faces all who would approach. The throne, visible by his right foot, has both vertical and cross bars for support. The cover, like parts of his costume, is trimmed with tiny tassels. More than a dozen ornately carved glyphs share his regal space. Wearing a tall multi-leveled feather headdress, this figure has acquired a great deal of stature. The horizontal elements of his clothing, layered with one elaborate piece of decorated fabric upon another, and his broken outstretched arms, all contribute to the satisfying symmetrical balance of the unit.

The stairway has housed other sculptural treasures too. In 1992 the circular stone carving sculptured for the dedication of a dynastic temple was discovered underneath the stairway. The inscription establishes Copán as a royal ceremonial center.[4]

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1 George Kubler. *The Art and Architecture of Ancient America*. New York: Viking Penguin, 1990. p. 219.
2 Gene S. Stuart and George E. Stuart. *Lost Kingdoms of the Maya*. Washington, D.C.: National Geographic Society. 1993. p. 18.
3 *1991 Fodor's Central America*. New York: Fodor's Travel Publication. p. 184.
4 Gene S. Stuart and George E. Stuart. *Lost Kingdoms of the Maya*. Washington, D.C.: National Geographic Society. 1993. p. 36.

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Sculpture in the Round

Sculpture in the round is at its finest at Copán. One scholar suggests the reason for the beautiful work was that the stone was easier to carve than at other sites.[1] There may have been another reason as well. At Copán the majority of the sculptures of figures were presented in front view. This approach is better suited for three-dimensions, whereas the profile is best reserved for low-relief sculpture. Among the beautiful sculptures in the round from Copán are the stairway sculptures, and this exceptional head from the debris of Temple 22.

This sculptured head with a very serene appearance is beautifully preserved. The peaceful face is framed by thick straight strands of hair or feathers. Large semi-circular representations of ear plugs offset the curving plume-like projection at the top of the head. With only one or two right angles in sight, the pattern of large curves repeated throughout adds to the tranquility of the image. The facial features are so distinctive, one is convinced this is a portrait of the highest order.

Maize God. Copán, Honduras. Late Classic, c. A.D. 770. Stone head from debris of Temple 22. H: 48 cm. 95-42-0/c727. © 1978 photograph by Hillel Burger, courtesy Peabody Museum, Harvard University, Cambridge, Massachusetts.

[1] Herbert J. Spinden. *A Study of Maya Art.* Toronto, Ontario, Canada. 1975. p. 16

Potter Oscar Quesada from Chihuahua demonstrates how to make a symmetrical bowl from coils of clay.

Maya Vase Making

Classic Maya painted pottery was made from local clays mixed with calcite, quartz, or volcanic ash. The ancient potter, like Quesada pictured above, probably began his work with a shallow mold. The sides of the pottery were built up with coils. Each coil may have been a carefully measured ring or doughnut shape attached to the pot with a combined process of pinching and scraping the clay. Queseda used lots of water as he joined the clay coil to the base.

Once the clay vessel was dried, the exterior surface was smoothed in preparation for a painted decoration. Cloth or softened leather may have been used to apply a light colored base coat of liquid-colored clay (slip). After the slip dried, the pot may have been burnished again. This glossy surface was great for the polychromed paintings. Possibly the artists used a slip-based paint called terra sigillata. With this medium, artists only had to use small amounts of their favorite coloring agents (red and black iron oxides, 3% or less, combined with 30% clay and 70% water).[1] More shades and tints of red and orange can be found in Maya pottery than any other color.

The pottery was probably fired at cones 022-016 (900-1260°F) in an open bonfire or pit fire. Only a few fire pits have been found so scholars know very little about how the pots were finished.[2] Because only low temperatures could be produced, the containers were heavy and the surfaces were soft.

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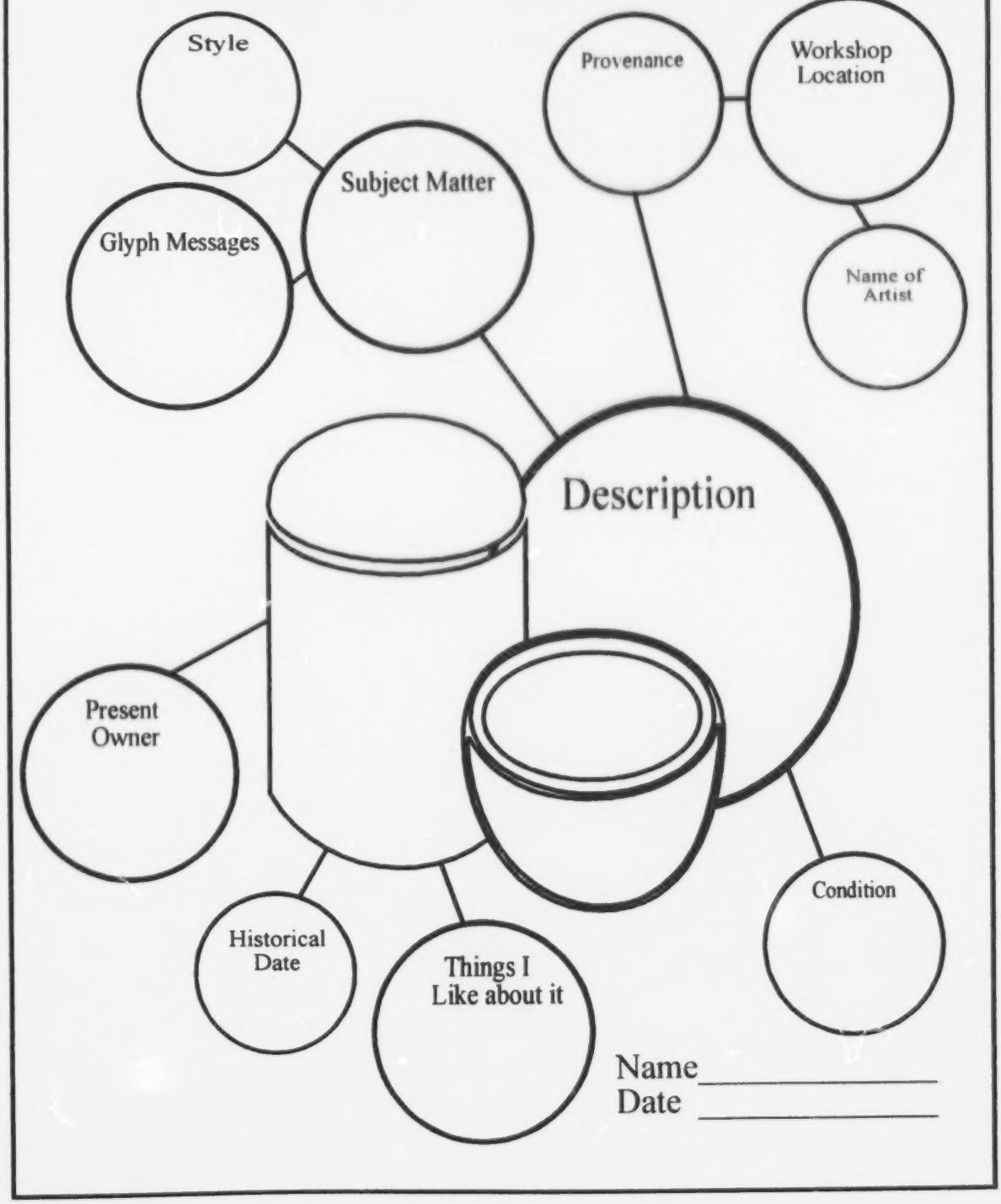
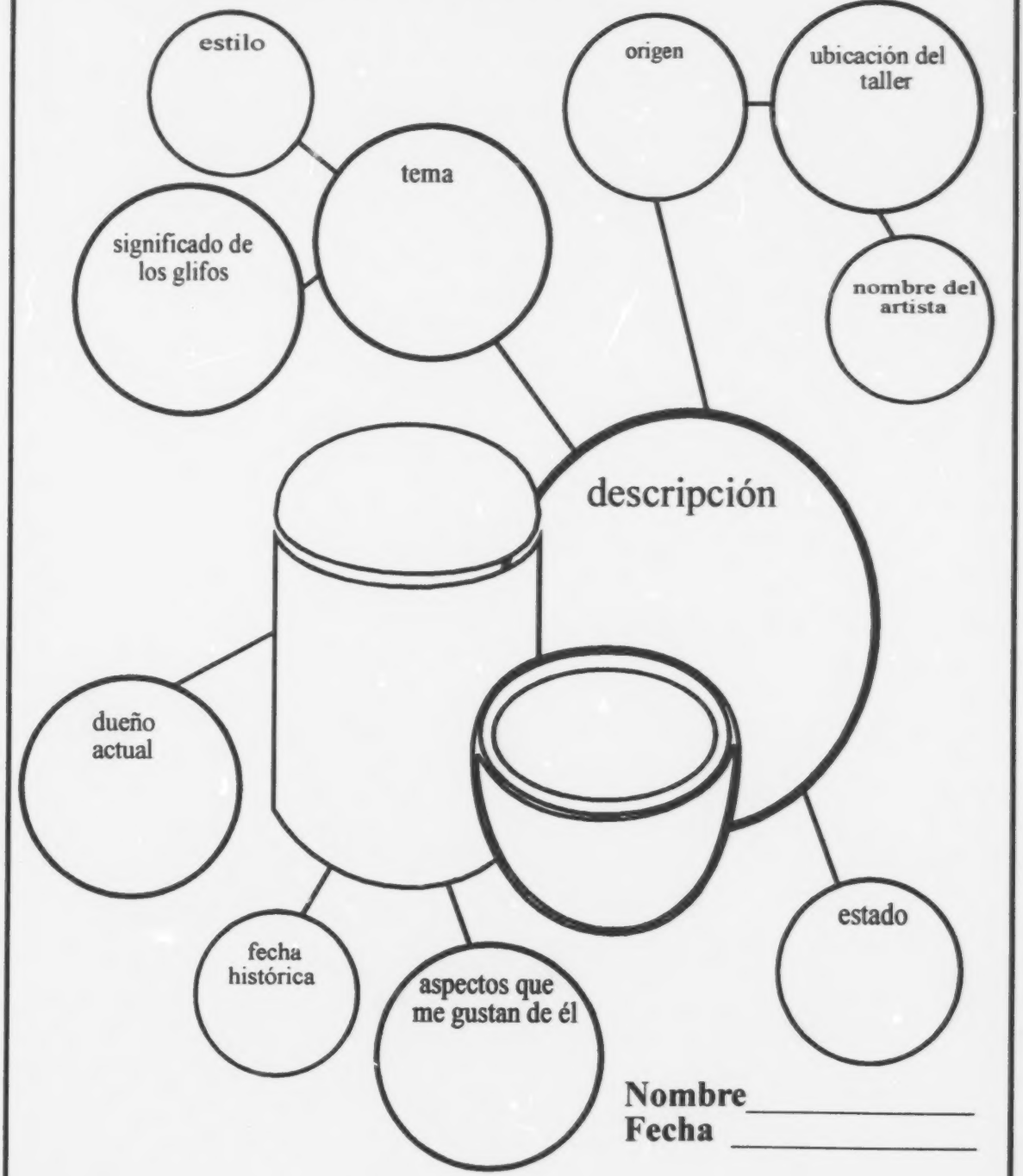
[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, 1994. p. 211.
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, 1994. p. 214.

Classic Maya Pottery



Name_____
Date _____

Cerámica clásica maya



Nombre_____
Fecha _____

Maya Plates of Clay

Plates, or vessels of clay, were used to serve different kinds of solid food and as containers for sacrificial and dedicatory offerings. Beautifully decorated pottery might be used as currency or "tradeware." Tamales or bread made from corn may be the most common type of food served on plates. In vase painting the artist sometimes painted this food on plates covered with a red sauce [1]

Many burials contain a cylinder vase, a bowl, and a plate to provide the deceased with a full meal and service set of dishes for meals in the after life. Some plates have kill holes to indicate they were funerary objects.[2]

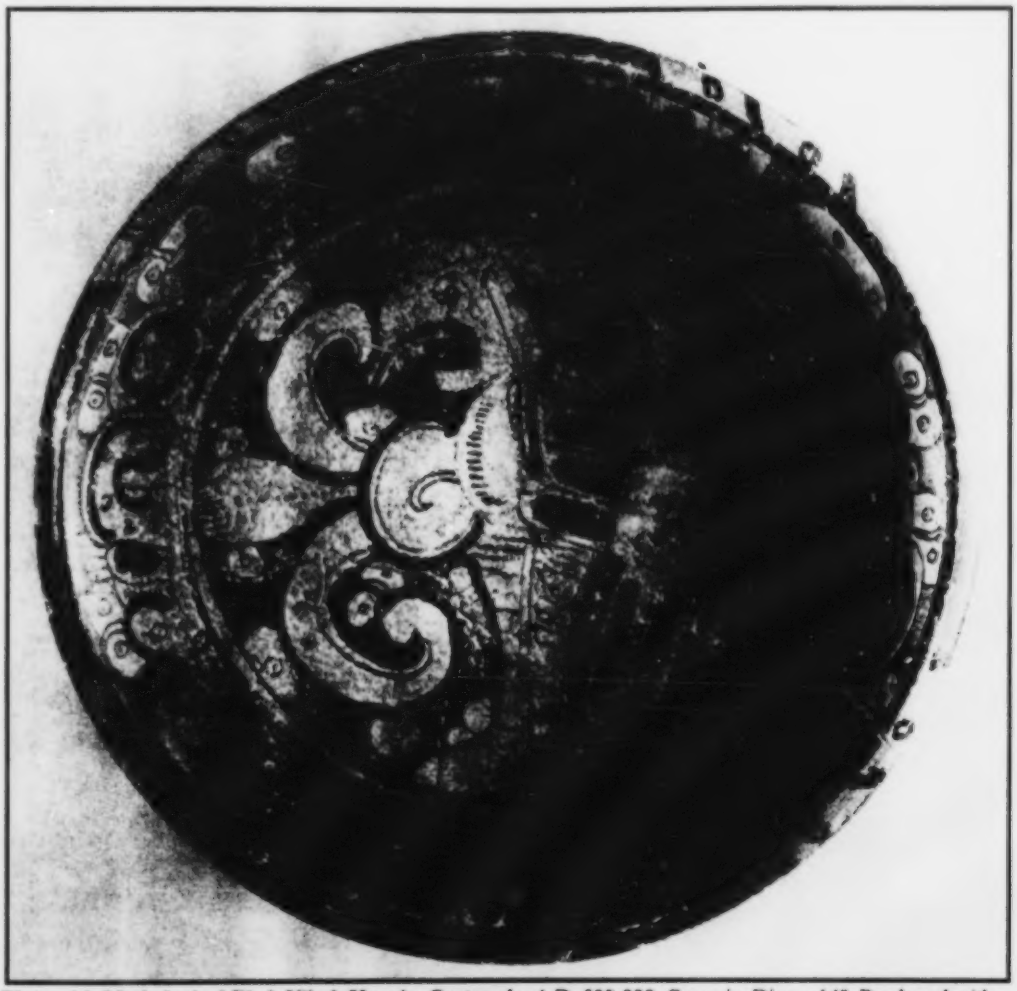
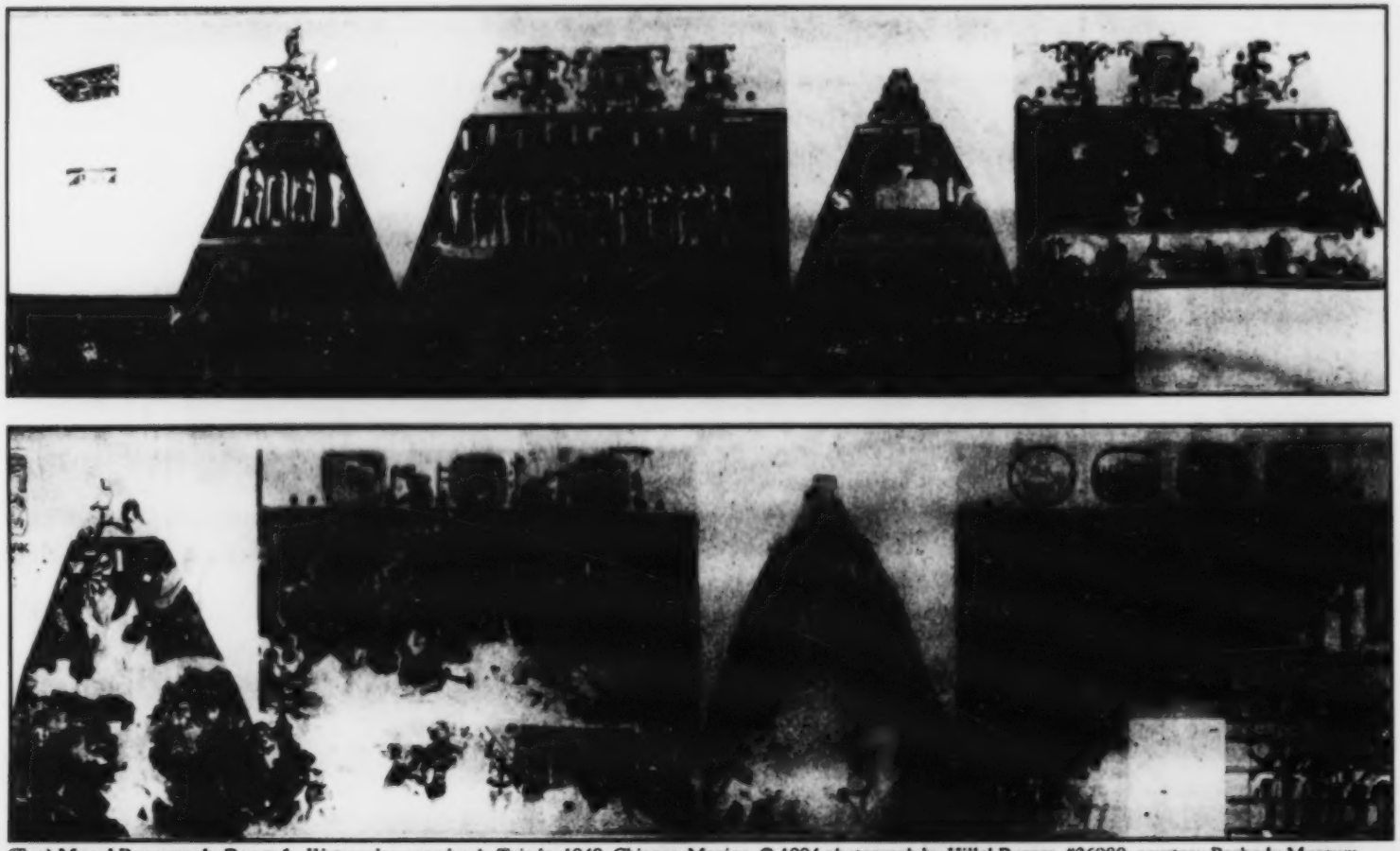


Plate with Mythological Bird, Vikub Kaquix. Guatemala. A.D. 500-900. Ceramic. Diam.: 14". Purchased with funds from the Art Museum Council, in honor of the Museum's 25th Anniversary. © 1993 Museum Associates, Los Angeles County Museum of Art, Los Angeles, California.

[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, 1994. p. 80.
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, 1994. p. 341.



(Top) **Mural Bonampak, Room 1.** Watercolor copy by A. Tejeda, 1948. Chiapas, Mexico. © 1994 photograph by Hillel Burger, #26980, courtesy Peabody Museum, Harvard University, Cambridge, Massachusetts. (Bottom) **Mural Bonampak, Room 2.** Watercolor copy by A. Tejeda, 1948. Chiapas, Mexico. © 1994 photograph by Hillel Burger, #26979, courtesy Peabody Museum, Harvard University, Cambridge, Massachusetts.

Painting

In 1946, the town of Bonampak was uncovered. In one of the buildings the walls and ceiling vaults were covered with a series of paintings portraying battle scenes, religious sacrifices, processions, and other events.[1] The murals covered 172 square yards of space. The first descriptions of Maya mural painting are to be found in the writings of John Stevens, a 19th century explorer. The subject matter of the three rooms of painting was the installation of an heir, under the leadership of Chaan-muan, on a day in early December, A.D. 790.

The paintings were done on plaster with mineral colors. First the outline was made in red, then the solid background colors were applied. The blank figures were painted next in full detail. The last step was to outline the figures in black.[2]

Like the polychrome vase paintings, the images painted by the Maya muralists are flat within contour lines, with a little attempt at highlighting. Figures in the distance are painted in the same tone and with the same intensity as figures in the foreground. The artists understood how to represent proportion, torsion, and overlapping, but when it came to representing the head, the profile view prevailed. In one charming depiction, a man at the end of a line-up of ballplayers turns to talk to the man behind him. His whole body faces forward, but his head faces the man behind him, as if attached backwards.[3]

The Maya artists liked historical paintings for subject matter. At Bonampak, the scenes were religious with a splendid pageant of Maya rulership taking place.[4] The story begins with the elaborate preparation for a ritual dance, consisting of the robing of those who were going to represent the earth gods. "We see the great chief with his wife, the lesser chief, the musicians, and the dancers. The fresco in the next room portrays an expedition for the purpose of taking prisoners for the sacrifice. The splendid battle scene and the extraordinary drawing of a naked prisoner that follows it can be considered among the most beautiful expressions of Maya art."[5] Prisoners of war were probably the sacrifices at this installation. Feasting, ritual combat, ceremonies, and dances completed the event. The processions included musical bands and people wearing masks of terrifying demons. When the Maya artist painted, differences in rank were shown by differences in attire. Scenes of torture were also painted on the walls. The life of the Maya illustrated within these murals is a life of violence and tyranny. But it is also a life that related agricultural cycles to dynastic succession.

Highly skilled, the Maya used a variety of colors and shading. The figures were treated simply but the accessories were very elaborate, and painted with rich and brilliant colors. The soft curves of the figures were painted predominately with reddish-brown paint. However, the huge feather headdresses of the Quetzal had a full range of color. The beautiful blue paint was made from attapulgite and Indigo.[6]

The murals were never finished. It is the last monument at Bonampak and one of the last from the Usumacinta Region. By A.D. 790, the Maya cities were beginning to collapse. Perhaps in the paintings of war at Bonampak, the Maya leave us a document of their demise. The little heir probably never reached the throne: he was the last in succession to be installed.

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1 Hans-Dietrich Disselhoff and Sigvald Linne. *The Art of Ancient America*. New York: Greystone Press. 1966. p. 114.
2 Ignacio Bernal. *Mexican Wall Paintings of the Maya and Aztec Periods*. New York: Mentor. 1963. p. 8.
3 Hans-Dietrich Disselhoff and Sigvald Linne. *The Art of Ancient America*. New York: Greystone Press. 1966. p. 73.
4 Ignacio Bernal. *Mexican Wall Paintings of the Maya and Aztec Periods*. New York: Mentor. 1963. p. 8.
5 Ignacio Bernal. *Mexican Wall Paintings of the Maya and Aztec Periods*. New York: Mentor. 1963. p. 16.
6 Merle Green Robertson, "Methods Used in Recording Sculptural Art at Palenque," *Actes du XLII Congrès International des Americanistes, Paris, France, 1979*. 460.

Cartoons

The drawings of the cartoonist help people find humor in life. People sometimes feel they are better equipped to face the day ahead when they enjoy the art of the cartoonist. Take for example Wiley's *Non Sequitur* cartoon of "WHY IT TOOK SO LONG TO HEAR ABOUT THE DISCOVERY OF THE ANCIENT MAYAN CIVILIZATION," a lesson on following directions. In spite of the apparent death of someone crushed under a huge stone, the cartoon is humorous for several reasons:

1. No one really knows why it took so many centuries to discover the civilizations of the Maya. This theory is amusing because of incongruity: ancient sign makers surely could not know what language to use when making their "booby-trap."

2. The pot-bellied explorers look out-of-shape, happy to see easy directions and a quick way to discover and enter the unknown.

3. The cartoonist has given the reader an unusual viewpoint. The reader can see that pulling the rope will release boulder after boulder, flattening one archaeologist after another.

4. The reader is given enough information in the leader's comment "yeah, but..." to understand that someone in the group believes there might still be peril ahead in following the instructions.

5. The group's leader appears to be *so-o-o* "stupid" because, instead of creatively trying a new approach, he suggests repeating the action of the victim "Tom."

6. The reader can usually think of other people who repeated mistakes by following directions or deceptive signs of people playing a joke or laying a trap. Their actions also slowed work down or the relay of information.

NON SEQUITUR
by Wiley
YEAH, BUT SINCE TOM HAS ALREADY TRIPPED THE BOOBY-TRAP, IT SHOULD WORK NOW...
WHY IT TOOK SO LONG FOR US TO HEAR ABOUT THE DISCOVERY OF THE ANCIENT MAYAN CIVILIZATION...

Wiley, NON SEQUITUR. © 1994, Washington Post Writers Group. Reprinted with permission.

The drawing by Wiley is very effective in the way the artist brings the reader into the scene. With a quetzal bird's eye view, we can follow the diagonal line formed by the boulder pattern and trough which almost points to the pondering group. The vertical rope dividing the rectangular picture plane ends at their point of destruction, and the jungle characters all face and look at the cause and effect.

Maya Cartoon Collage

There are many exciting images in Maya art. Select an image or a glyph and explain its importance by making a cartoon out of it. One example of a cartoon collage is Ann Fuerst's adaptation of Andrea Stone's drawing of Monument2/Zoomorph B, Quiriguá. Fuerst suggests that the sculptor who "over-decorated" the monument caused the monster to come to life and eat him. Use the format with two bubbles below for your cartoon and the image you selected, or create your own background.

This cosmic-monster sculpture is covered with carvings all over.
It looks to me like the "tagger" is trying to get out of the monster's mouth!
© 1994 Ann Fuerst and Andrea Stone

Career Choice: Newspaper Illustrator

The drawings on these pages were not done by the Maya, but by people who studied the sculpture of the Maya. One drawing is exactly like the original sculpture, and the other looks like a drawing of a sculpture. Both artists are scholars. Ian Graham is a Maya scholar who increases our understanding of the accomplishments of the Maya with the precision of his contour line. Richard Milholland is a different kind of scholar. He is a creative artist. Milholland illustrates newspaper editorials. For his illustration of the editorial "Mexico's Fateful Election"[1] he researched the art of Mexico, and recalled his experiences as a student in Mexico City at the University of the Americas.

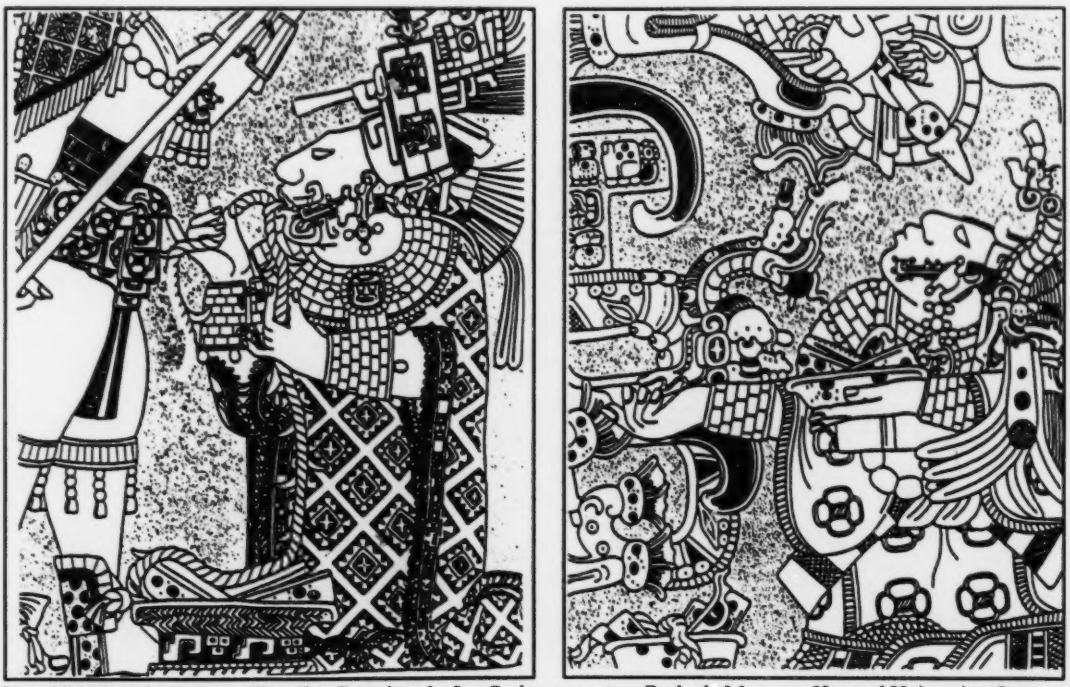
Richard Milholland. **Mexican Ballot Box**. Pen and Ink . *The San Diego Union-Tribune*. 8/21/94. © 1994 Richard Milholland. Reprinted with permission of the artist.

[1] George Grayson. "Mexico's Fateful Election," Insight. *The San Diego Union-Tribune*. 8/21/94. pp. G-1, G-4.

Milholland never had a chance to read Grayson's editorial about the presidential race between Zedillo, Cevallos, Cárdenas, and six others following Colosio's assassination March 23, 1994 and the dreams of politicians for the dividends of the continent-wide trade pact (North American Free Trade Agreement signed November 1993) before doing this drawing. The illustrator talked to his editor on Monday about the idea and got a synopsis of the story. Tuesday morning was his first deadline when his sketch was due. After a discussion about the sketch, Milholland went to work, completing it for publication by his Wednesday morning deadline. When the editor called on Thursday saying the article changed somewhat, Milholland had to make a few alterations, even though he always tries to make his drawings a little ambiguous. The illustration was published on Sunday.

During the 36 hours he worked on the sketch and the final drawing, Milholland went to the library and studied many pictures, including Maya sculptures. He said, "I looked at a lot of sculpture that day!"[1] But he has a special fondness for the lintel carving of the kneeling woman and even has a color reproduction of it in his studio.

Next he used his wonderful imagination to create and draw a unique hand-carved ballot-box based on the style of Yaxchilán relief carving. Ancient ruins of the Classic Maya culture in Yaxchilán are located just west of the Usumacinta River, which forms one of the country's eastern boundaries. To complement the sculptural look of his illustration, the newspaper designers even chose chisel-carved lettering to title the editorial.



Yaxchilán lintel carvings. (Details). Drawings by Ian Graham, courtesy Peabody Museum, Harvard University, Cambridge, Massachusetts.

[1] Personal communication September 9, 1994

Not only is Milholland's ballot box an exciting illustration because one can imagine the amount of time it would take if someone really did carve every ballot box in Mexico for the precious contents of the voter's choices, it is precious because the box is "carved" with the designs of the ancient Maya embracing the treasures of the Mexican people, and the opportunities they already have in hand as they face the modern world. In reality, many of the ballot boxes in the September 21, 1994 election were actually transparent. Milholland said he has used ballot boxes in many of his illustrations over the years.

Milholland's drawing is not of any one sculpture like Graham's. It is a composite. The frontal pose with profile head, open mouth, and costume with jewelry and elaborate hairdo is ancient Mayan in appearance. The figure has the regal robe of a noble female. The illustrator said he chose a woman because of the importance her vote would have in this election. Because the figure is cut off at the waist, the viewer does not know if the woman sits or kneels in a position often associated with Maya royalty. But the artist said he had said what he wanted to say, and didn't feel it was necessary to draw any more. Her garment, called a *huipil,* has a distinctive design associated with the brocading techniques of Mexican Indians. The artist has changed the diagonal patterned unit,[1] ever so slightly, to a horizontal design, but retains the "X" look of a Maya lady's robe to symbolize the voter's "X" for some of the nation's illiterate.

No one knows what is locked inside of the voter's mind and Milholland creatively adds to that idea by drawing a clean horizontal or apparent opening across the royal head. The locks have another meaning as well. The artist portrayed the idea of an honest election by having three locks on the ballot box. One lock to keep individuals from stealing votes as they are deposited is located at the top. It doesn't really work, if one studies the hinges. The two locks at the base are broken "to demonstrate the problems with the previous election because the ballot boxes were opened." said Milholland. "Mexico has experienced," according to Grayson, "vote stealing by the Institutional Revolutionary Party before. The country has been bracing itself against accusations of falsified voting lists and efforts to steal the election."[2]

Milholland has also nurtured the ideas between Zedillo's campaign slogans which linked the hopeful with "well-being for your family" and "a vote for peace." These are not ballots the sculptured figure holds, but the opportunities available to Mexicans today at any one time. Grayson discusses large corporations, small-labor-intensive industries, and the problems of the Mexican peasant farmers. The figure is drawn eyeing the journey of a plane (tourist industry) in sunny skies (the farmer) while embracing symbols for schools, factories, housing and technology.

The artist said he pondered for a long time about the area in front of her eyes. "I thought about another plane coming towards the first plane, and even a space satellite. And then I went just for the sun and the plane," he said.

Milholland's illustration is an exciting one because it causes us to think about modern Mexico in terms of the lost civilization of the Maya. While the illustration is skillfully drawn, we can appreciate it even more when we know about the art of the Maya and read the editorial.

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[1] While Milholland studied photographs of sculptures and not drawings by Graham for his illustration, it may be easiest for us to use Graham's drawings for comparison. Personal communication August 1994.

[2] George Grayson. "Mexico's Fateful Election," Insight. *The San Diego Union-Tribune.* 8/21/94. pp. G-1, G-4.

Richard Milholland, Illustrator

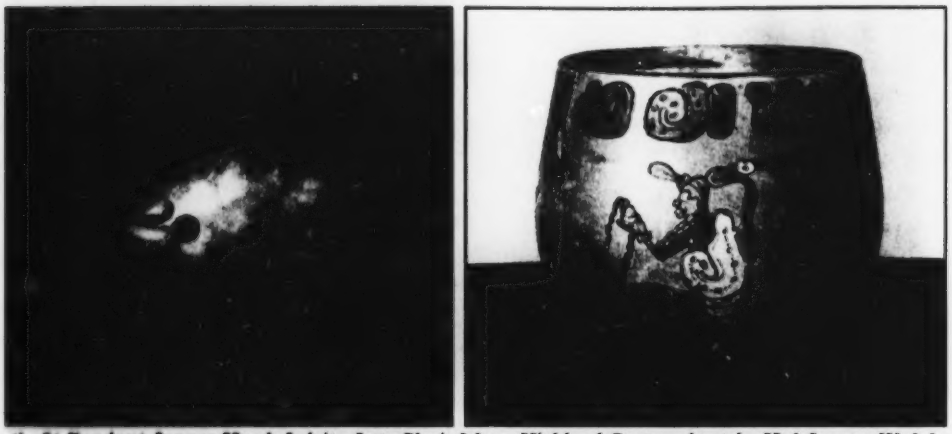
Richard Milholland has a studio near Del Mar in California. He has been a professional illustrator for 14 years. Milholland received his art training at Newark School of Art and The Brooklyn Museum of Art, and his MFA from the University of the Americas in Mexico City. He teaches at Ottis and UCLA (Extension).

His drawing in this book took him about 36 hours to complete. Usually the editorials are faxed to him and he has only about 24 hours to read, research, and draw the illustration before it is due. He used a ball-point pen, working on paper. He likes to draw with a golf score-card pencil first. He prefers to use paper that has a little tooth because he likes to drag the pen on the paper. When he starts, he begins with a thumbnail sketch. Sometimes he uses broad outlines. "I work from my head. I start at the top of the drawing and work downwards," he remembered, "completing the drawing as I go."

He advises young people who want to go into illustration as a career that it is very difficult. With his own students, he points out they must be able to get along with others. They must be good readers so they can communicate well. "My students must be able to describe their work briefly and concisely," he noted, "because they have to pitch their work on the phone. I make them practice this in class. I also make them do sketches using a deadline."

Activity:

In the space below, illustrate a story or folktale about the Maya in pen and ink. Work with a partner who has selected the same story. Set a deadline that you both can agree upon for completing your illustrations. Complete the illustrations on time and then take turns describing your pictures to a third person or a group of people who can not see your drawings as you describe them. Ask the third person or group of people to time you and to take notes as they hear the descriptions. Have them make suggestions on how you can describe your work briefly and concisely after they see the illustrations.

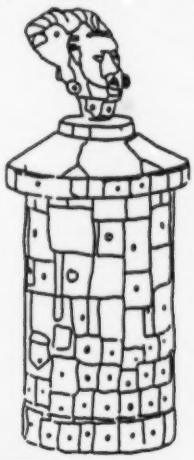


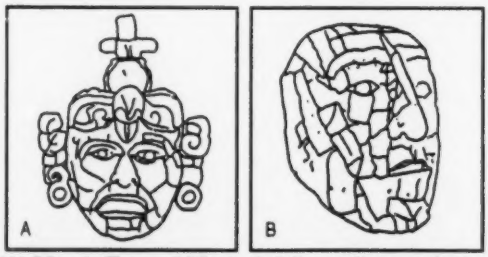
(Left) **Pendant Jaguar Head**. Jadeite. Late Clasic Maya. Highland Guatemala style. H: 1.8 cm. x W: 2.3 cm., D: 3.2 cm. B-541.MAJ. © 1994 photograph courtesy Dumbarton Oaks Research Library and Collections, Washington, D.C. (Right) **Polychrome Vase, God N with Necklace**. Late Classic Maya. 8th century A.D. H: 16.2 cm. B-206. MAP. © 1994 photograph courtesy Dumbarton Oaks Research Library and Collections, Washington, D.C.

Jadeite

Jadeite was greatly admired by the Maya. Jadeite beads were worn as ear plugs and as necklaces. Above, a vase painting[1] shows God N seated within a gastropod shell, studying a large jadeite bead. The beautifully formed jadeite sculpture of a jaguar head above is evidence that the craft of bead-making was highly developed. The bead was drilled through the mouth and the back of the head with stone tools. It was also drilled below the ears perpendicular to the other drill hole. Even the eyes have shallow drill marks. The nose and brow are incised. The open mouth shows the wild-cat's teeth.

Jadeite mosaics appear to be an important part of the daily costumes and burials of the elite. Jadeite mosaics were used on wooden backings for masks and containers (see below). The artisans were so fastidious, they even drilled a hole in each of the polished plaques—there were 900 of them on the cylinder vase—applied resin glue, and used pegs to attach them to the wooden base. Then they put a tiny jade plug over each wooden nail.[2]





(A) **Mosaic Funeral Mask**. Jadeite, pyrite, and shell. A.D. 527 from the grave of a noble in Tikal. (B) Mosaic Funeral Mask. Jadeite, shell and obsidian from the burial of Lord Pacal. (Margin) **Jadeite Mosaic portrait jar with image of Double-comb, Ruler of Tikal**. A.D. 730.

[1] The rim is partially written in the Primary Standard Sequence.

[2] William R. Coe, Ph.D., "Resurecting the grandeur of Tikal." *National Geographic*. Vol. 148, No. 6. December 1975, p. 794.

Function 6

Pan-Pipe Player Ocarina. Jaina Island, Campeche. Molded Cream-colored clay. A.D. 600-900. X78-4551. Maremont Collection. © 1994 photograph by Yoram Lehman, courtesy Israel Museum, Jerusalem, Israel.

Function

(While displaying the picture on the other side of this page to the students, you may find it helpful to refer to the text and questions on this side of the page.)

Function refers to the different uses for which works of art have been made, such as commemoration, communication, and worship. Objects such as buildings, textiles and pottery can be described in terms of their utilitarian function, but all art has an expressive function.[1]

1. How has the artist designed this clay sculpture so that it is easy to hold so it can function as a musical instrument? _____

_____

_____

The wide part of the ocarina, where the pan-pipe player has bended knees, makes the instrument easy to grip. This clay sculpture of a person/creature playing a flute, flanked by two open-mouthed (singing?) serpents, functions as a musical instrument. Three holes are visible in the front. The barefooted figure has a very large head, with exaggerated features. Four fish-tail shapes extend from the piece; two extend on either side of the conical-shaped head, and two near the feet. The arms and hand position provide the only asymmetrical part of the composition. The design, wider at the base than at the head, is a popular compositional format with the Maya. This sculpture was made in a mold so perhaps many people owned musical instruments like this and enjoyed the artist's creativity in ancient times.

2. What kinds of sounds do you suppose the Maya heard and wanted to make with their instruments? (see the section on bird songs, page 247).

_____

3. If the pan-pipe player on this instrument represents a deity, what special importance might be given to the person who uses this instrument? Explain your answer.

_____

4. Just what do you think makes this ocarina function?

_____

_____

An ocarina is a vessel flute with an airduct assembly. The air-duct or mouth piece is one of the most important parts of the clay instrument. Another is the amount of air that is blown into it. The more air, the higher the pitch. If there are fingerholes, pitches may change by opening a successive combination of fingerholes. Inside the ocarina there may be a number of chambers for the air to "jump" to when more air is blown into it.[2]

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[1] Arthur Efland, editor. *Planning a Balanced Comprehensive Art Curriculum*. Second Edition. Columbus, Ohio: State Department of Education. 1992. p. 19.
[2] Susan Rawcliffe. "Complex Acoustics in Pre-Columbian Flute Systems." *Musical Reprcussions of 1492*. Washington, D.C. :Smithsonian Institution Press. 1993. p. 11.

Chocolate Drinks

Cacao was one of the most important harvests of the Maya. The cocoa bean and the drink made from it was so valuable, only the nobility were allowed to drink it. It may have been served in cylindrical clay pots.[1] It was reported in the 16th century that this drink was a foaming drink used at celebrations. The Maya ground the cacao until it became a grease that looked like butter. They also ground maize to add to it. The mixture was thinned with water and flavored with chili water, flowers, vanilla, or honey.[2] Even today, beverages are made from ingredients of corn and cacao beans.

Parents are great resources for schools to have. Olga Velázquez is photographed here in her home kitchen with her son Sergio. On the left she breaks up the chocolate tablets as Sergio gets ready to add more milk. On the right she uses the ***molinillo*** (wooden whisk-like implement) to blend the cooked ingredients. Photographs by Ann Fuerst in Chula Vista, California.

Velázquez's Hot Chocolate

2 cups of milk
1 round tablet of Mexican chocolate[3]

Measure 2 cups of milk into a saucepan. Break up the tablet of Mexican chocolate and add to the milk. Cook over medium heat about ten minutes. When it begins to boil, take the *molinillo* between the palms of your hands and rotate it like a handy blender around the edge of the pot and through the contents of the saucepan. Serve the chocolate while still hot and frothy.

Velázquez's Atole de Masa (6 to 8 servings)

6 cups of water
2 sticks of cinnamon
4 cones of *piloncillo*[4] (or 1 cup dark brown sugar)
1 can evaporated milk
½ cup instant corn masa
1½ cups of water

Making atole is a Mexican tradition even enjoyed by the ancient Maya. Today, as then, it is usually served with tamales. Measure and pour the six cups of water into a large clay pot with the cinnamon sticks. Bring to a boil. Add the *piloncillo*. When the sugar cone has dissolved, and the water boils again, add the canned milk. Meanwhile, in a separate clay bowl, mix water with the corn masa until it is very smooth. Gradually add the corn masa "batter" to the hot liquid, pouring it through a strainer. Stir constantly with a wooden spoon for about 10-15

[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 77-78.
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 77-78.
[3] Be sure to use a Mexican chocolate tablet because it already has a sweetener in it.
[4] A solid cone of brown sugar usually available where Mexican specialty foods are sold.

minutes until it thickens. You can add more corn masa "batter," as you stir, to the hot liquid to make it thicker. Flavorings like chocolate may be added to this "base" or just enjoy it as it is.

Velázquez's Champurrado

10 cups of water
1 can evaporated milk
2 sticks of cinnamon
1 cup white granulated sugar
4 round tablets of Mexican chocolate
¾ cup *toasted* all-purpose flour (with 2 cups water)

Measure water into a large pan. Add the cinnamon and bring it to a boil. Next, break up the four tablets of Mexican chocolate and add to the hot water. Stir the chocolate mixture until all the chocolate is dissolved. Continue stiring and add the milk and sugar. Bring to a boil. In a small bowl of toasted flour, mix in the water until smooth. Gradually add the toasted flour "batter" to the boiling liquid. For a smoother drink, use a strainer when adding the "batter" to the hot water. Stir constantly for about 10 minutes until the champurrado thickens. More toasted flour can be added during the cooking time if a thicker drink is desired. Serve and enjoy! Next time, for a different taste, make it with corn masa instead of flour.

Toasted Flour

The flour may be toasted a day or two ahead, cooled, and stored in an air-tight container. To toast the flour, use a small frying pan, and a wooden spoon. Measure the all-purpose white flour into the pan over medium heat. Stir constantly so it browns, but does not burn. Cool and store.

Atole de Masa. Olga Velázquez demonstrates how to make the drink the Maya enjoyed. Glyphs on small decorated clay bowls described the contents as being similar to that enjoyed by modern-day Mexicans. (Left) This Chula Vista School District parent shows her two sons how to make atole in a clay pot. (Right) After the water is heated, and the milk is added, Olga gradually adds a batter she has made with instant corn masa and more water. She likes to serve the atole with tamales, another dish the Maya enjoyed. Maya vase painters illustrated tamales, or similar-looking food, served on plates.

Name • Nombre_____ Date • Fecha_____

Cacao Glyph Search • Busqueda del Glifo del Cacao

In the box above are three glyphs. Each glyph is the Maya word for *cacao*. Can you correctly identify the glyph for *cacao*? Given in the box below are five numbered glyphs. Which glyph in the box below do you think is the glyph for *cacao*? Give the number and explain your answer in writing.

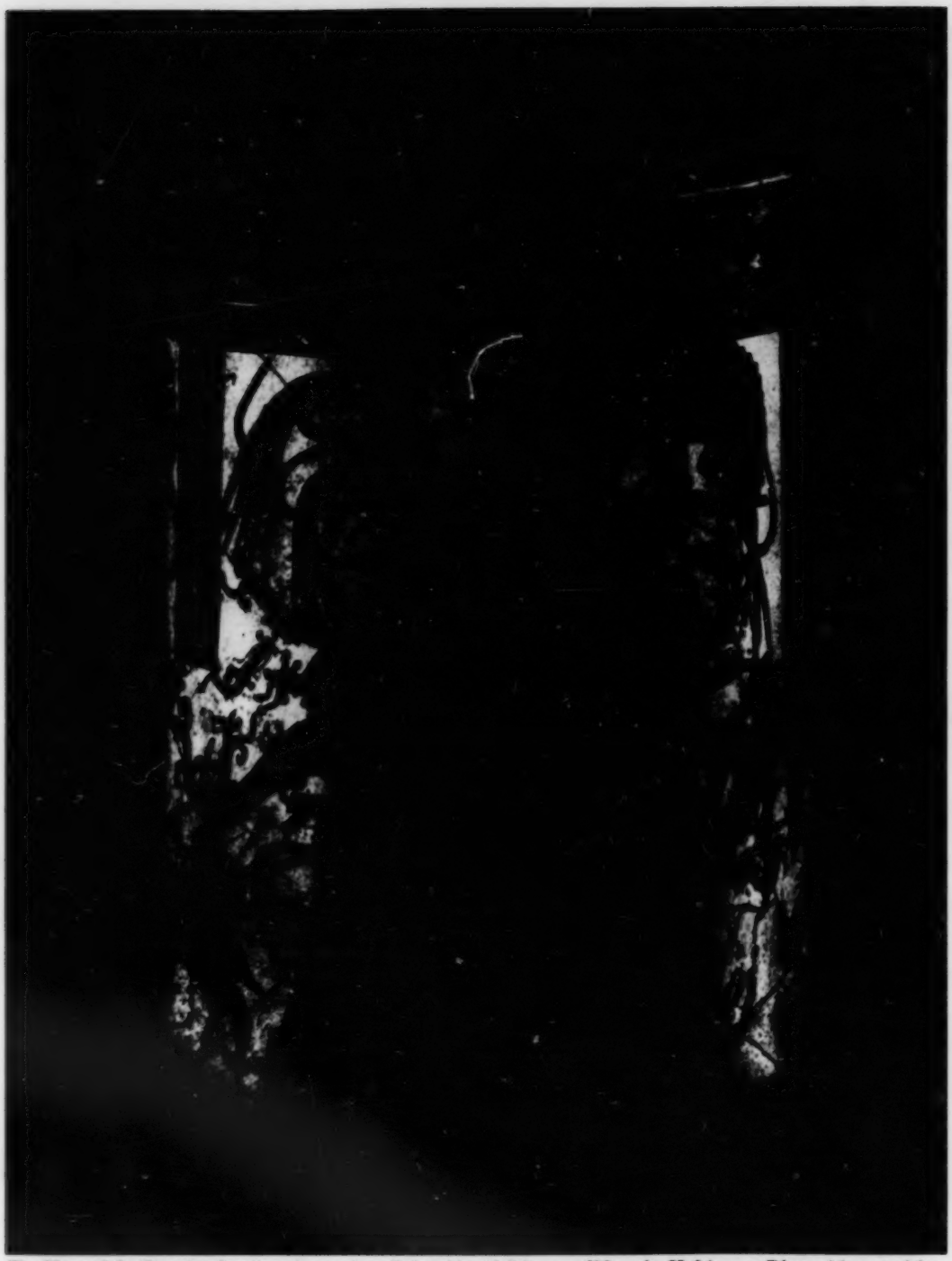
• En el cuadro anterior hay tres glifos. ¿Puede Ud. distinguir el glifo de "cacao?" En el cuadro inferior hay cinco glifos numerados. Encuentre en el siguiente cuadro cuál es el glifo que significa "cacao." Anote el número que le corresponde y dé una explicación por escrito.

I picked glyph number _____ because _____

• Escogí el glifo número_____porque_____

221

220



The Vase of the Dancing Lords, primary view. Painted by Ah-Maxam of Naranjo. H: 24 cm. x Diam.: 16 cm. c. 8th century A.D. from the Ethel T. Scarborough Fund. © 1994 photograph courtesy of The Art Institute of Chicago, Chicago, Illinois.

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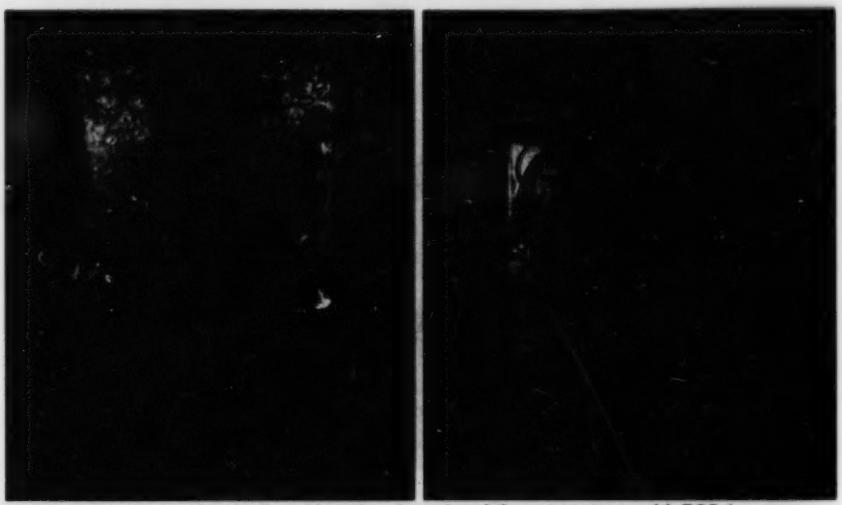
Primary Standard Sequence

One way to appreciate Maya pottery is to learn how to read two sets of painted images: the glyphs painted on the rim of the vessel (and sometimes on the base), and the illustration painted on the vessel. Unfortunately, as far as scholars can tell us, the two are not related to one another. In fact, the imagery is secondary to the glyphs painted on the rim. Very seldom does the sequence of glyphs begin at the same starting point as the picture.

The images painted on the rim of a pot may be painted in the Primary Standard Sequence. The images on the "wall" of a vessel may be painted there as if the wall were a continuous surface. The frieze-like illustration encricles the vessel and wraps all around it. Sometimes verticals divide the illustration, and other times, like the Buenavista vase, the illustration is continuous. To look at this illustration all at once, we need to make a "roll-out." One scholar of Maya vessel photographs, Justin Kerr, has developed a technique so that he can photograph Maya vases and record their images as "roll-outs." Two of his "roll-outs" are reproduced in this guide: the Buenavista vase on the cover and the Ball players on a vase owned by the St. Louis Art Museum.



Ah-Maxam is the royal artist from Naranjo who painted these two vases with PSS (see page 208). The first (left) has a pattern of water lilies. The Vase of the Waterlillies has the dimensions H: 24 cm. x Diam.: 15 cm. (Right) The Vase of the Dancing Lords, (secondary view) is the same height, but one cm wider in diameter. H: 24 cm. x Diam.: 16 cm. Both are c. 8th century A.D. from the Ethel T. Scarborough Fund. © 1994 photographs of vases courtesy of The Art Institute of Chicago, Chicago, Illinois.

Many of the hieroglyphs we can read today on Maya pottery have been identified because they reoccur on the ancient ceramic forms in a certain sequence or in predictable variations. It has also been possible to identify these glyphs because pictures of the Hero Twins and other personalities of the Maya epic myth the *Popol Vuh* have been illustrated on painted pottery. The scholar Michael Coe called this kind of repetition in Mayan art forms the Primary Secondary Sequence (PSS). Today the PSS is interpreted using linguistic deciphering techniques.[1] Keep in mind, no matter what the imagery is on the vessel, the PSS does not vary.

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[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period.* Durham: Duke University Press, p. 108.

The Five Main Sections of the Primary Standard Sequence (PSS)

- **Presentation**
- **Surface Treatment**
- **Vessel Type**
- **Closure**
- **Contents**

1. Presentation
Three glyphs providing the information which begins the Primary Standard Sequence make up the presentation section. These glyphs are called: Initial sign, Flat Hand and God N (or Step). Together the glyphs read "[It] came into being, was presented, was blessed..."

2. Surface Treatment
Several glyphs are used for this section. They are Fire Quincunx, the glyph "write/paint" (and its verbal suffixes), or lu-Bat, the glyph for "carve," and the Manik Hand Glyph meaning "[it's] surface." Sometimes a "Bat" glyph is substituted. "The surface Treatment section reads "was painted (or carved), the surface of...," or "was painted (carved)..," or in some cases "(was blessed) the surface for its writing...." Sometimes no glyphs are given. (See pages 207 and 208.)

3. Vessel Type
At least three types of vessels were made by the Classic Maya. In PSS, the Wing Quincunx glyph means "his/her drinking vessel," while the inverted Ahau means "his plate." Reference can also be made in PSS to the craftsmanship of the vessels such as its thin "walls."

4. Contents
This section has to do with the function of the pottery. Cylindrically shaped vessels held liquids, semisolid foods were put in bowls, and solid foods were identified with plates, but not a specific solid food. The most common sign on pottery cylinders is the sign of the fish: *kakaw* (*cacao* or chocolate). On bowls, the glyph for *ul* or *sa'* was written. This staple (*atole*), referred to on these painted bowls, in the Maya diet resembled a cooked corn mixed with water. Sometimes this grainy liquid was mixed with honey or sugar. Plates for solid foods often held "maize bread" or tamales.[1]

5. Closure
At the end of the PSS is the closure section divided into two parts: common descriptive epithets and the personal names and titles of an individual. The glyphs associated with some of the epithets are Rodent Bone and Hand Monkey. When a titular phrase is used, translated as "spirit companion," the owner or patron of the vase may be dead. The personal names may be titles, a patron's name or political affiliation, or the name of the artist.

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[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, p. 115, 118-119.

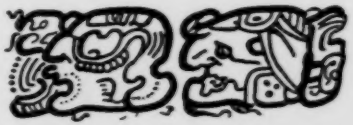
Primary Standard Sequence

Study the glyphs[1] in the Primary Standard Sequence that appear here. The set of glyphs is found on the Buenavista Vase (front cover of *Maya Art Activity Book*). A translation for the glyphs is given. Use this study sheet to help you understand and subdivide glyphs you find on rims of other vases painted by the Maya.

Came into being | was blessed | his drinking vessel | for tree-fresh cacao | Fire Tapir | Sky God K | holy lord of Naranjo | pure artisan | place of the upright one

1. Presentation

ay-a *hoy-i*



came into being, was blessed,

2. Surface

3. Vessel

y-uch'ab

his drinking vessel

4. Contents

ta tsih *te'el* *kakaw*

for tree-fresh cacao.

5. Closure

K'ak'-Til *chan k'awil* *kul-ahaw (Naranjo)* *sak-Chuen* *6-kab-nal*

Fire-tapir | sky-God K, | holy lord of Naranjo, | pure artisan | place of the upright one

[1] Drawings of glyphs by Barbara MacLeod in Dorie Reents-Budet, *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, p. 129. Reprinted with permission of the publisher.

Name_____ Date_____

Primary Standard Sequence • Modelo de secuencia básica

Study the glyphs with a partner and subdivide them correctly.[1] Explain the reasons for your selections.
• Examíne los glifos con un compañero y subdivídalos correctamente. Dé una explicación de sus selecciones. •

1. Presentation 1. Presentación	2. Surface 2. Terminado de la superficie	3. Vessel 3. Tipo de recipiente	4. Contents 4. Contenido

5. Closure 5. Conclusión

208

227

228

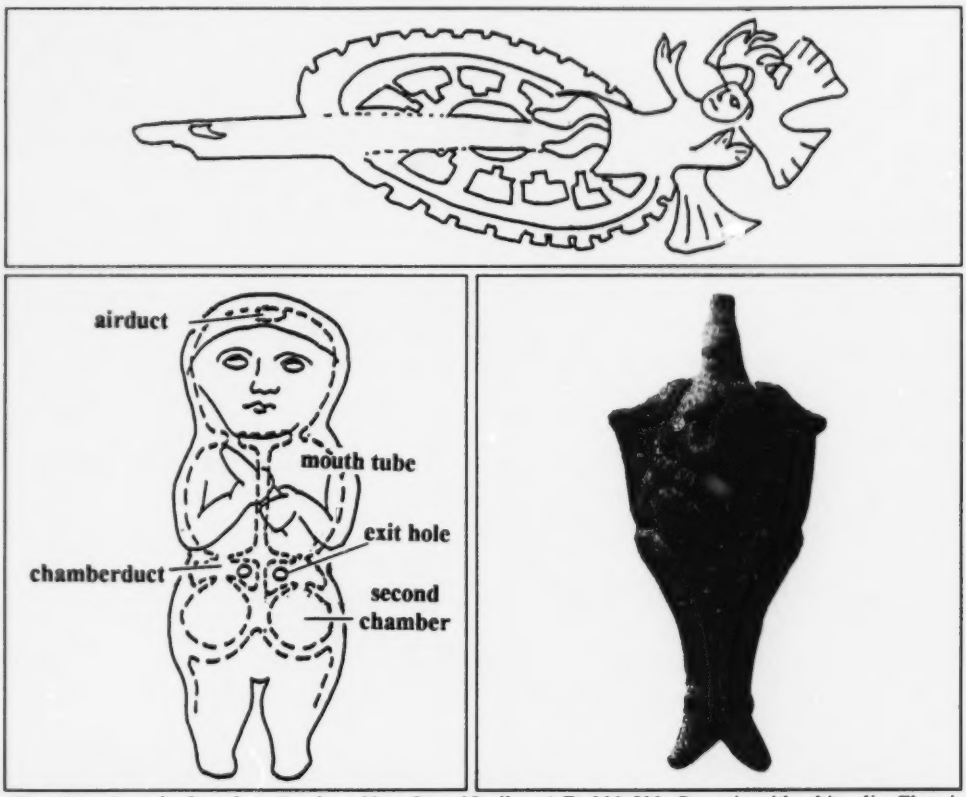
[1] Drawings of glyphs by Barbara MacLeod in Dorie Reents-Budet, *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, p. 186. Reprinted with permission of the publisher.

Maya Musical Instruments of Clay

Flutes and Ocarinas

The Maya musical instrruments are so interesting to look at, this ancient civilization must have appreciated music very much. One amazing design is the flute with a notched disk and bird-like female attached. There are no finger holes on top of the flute decorated with the woman wearing a bird headdress. She wears a short skirt and spreads out her arms, which end with "feathered" hands.

The ocarina is a globular flute with a limited range. The pitches are achieved by opening a successive combination of fingerholes. These musical instruments had an amazing diversity of symbolic and sculptural forms. Ancient ocarinas may have anywhere from two to four holes with a few having six to eight holes. The frog ocarina has sixteen holes on the front. According to Rawcliffe[1] some of these holes may just be decorative.



(Top) Drawing of a flute from Southern Vera Cruz, Napiloa. A.D. 300-500. Ceramic with white slip. Flute in collection of Los Angeles County Museum of Art, Los Angeles, California. (Bottom left) **Double Chamber-duct Flute.** Bahia, Ecuador. 400 B.C.-A.D. 400. Drawing by Jim Grant, printed with permission of Susan Rawcliffe. (Bottom right) **Frog Ocarina**. Ceramic. Vera Cruz. A.D. 600-750. H: 9". M.90.168.26. Gift of the Art Museum Council. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California.

[1] personal communication, July 1, 1994.

Artist Susan Rawcliffe plays a "squash" ocarina she made from clay.

Create an Ocarina

Allow several hours for making these wonderful clay instruments. Plan to make several and then experiment with different shapes and effigies as the pre-Columbian craftsman did. The shape described below is a short, covered cylinder in appearance.

Materials:

heavy cardboard rolls about 3" in diameter, 5" long, one per student
1 - 25 lb. brick of soft low-fire clay for every 16 ocarinas (approximate)
cutting wire or nylon filament
straight edges
cutting knives to make holes in ocarina and to score
rolling pins
rolling pin guide sticks ¼" thick (2 per rolling pin)
canvas for covering table tops when rolling out the clay
newspapers
scotch tape
bamboo or pallet knives for slot sticks (directions to follow)
vinegar (for slip)
watercolor style paintbrushes
portable fans or hair dryers if weather is damp

Clean up:

broom and dust pan
bucket for scraps
heavy-duty brush for table tops

230

face mask (to protect lungs from dust)
hand lotion
heavy plastic to wrap completed projects

Firing and finishing:
acrylic paints
brushes
shoe polish
cones for firing at 04 or 02

Greenware Directions

1. Review the distribution of materials and the clean-up procedures.

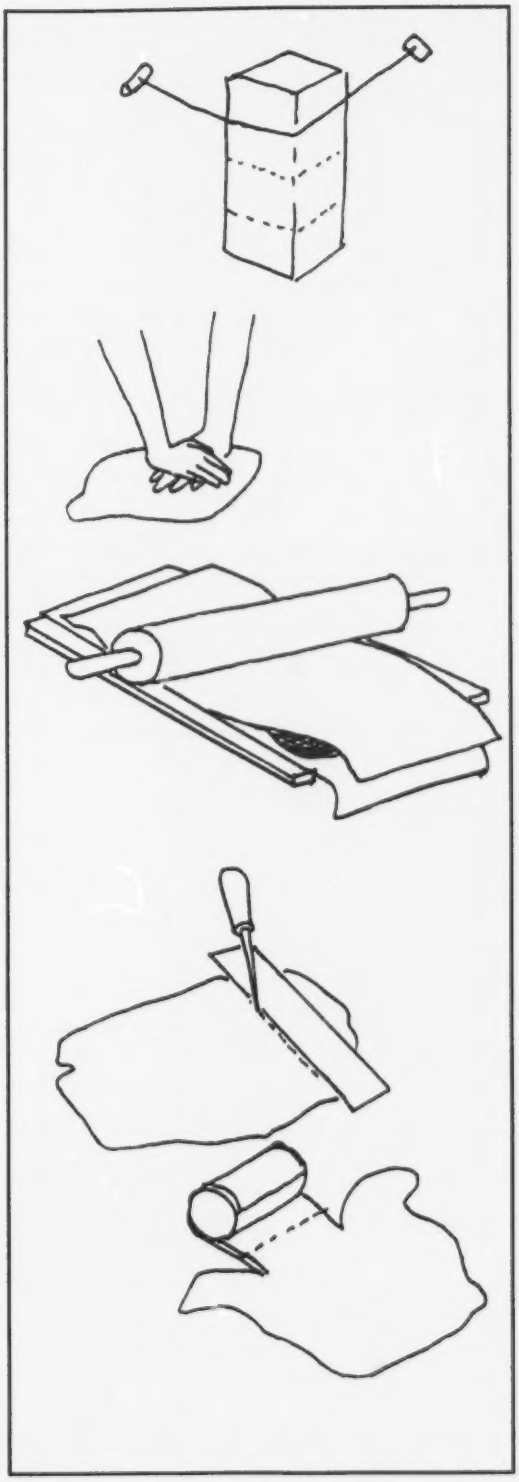
2. Show examples of ocarinas from different cultures and demonstrate playing an ocarina similar to the one the students will be making.

3. Cut the clay brick into fourths with the cutting wire, and into fourths again. This can be done ahead of time if clay is kept moist. Flatten the clay slab. To do this "quietly," place the clay slab on a low table covered with canvas-type cloth, and put the heel and palm of one hand on the middle of the slab. Next, place the other hand on top of the first. Press down on the clay. Repeat the flattening process. Roll out the clay as it is sandwiched between two layers of cloth. Use guide sticks so the slab will have an even thickness.

4. Wrap cardboard tubes tightly with newspaper and secure lightly with scotch tape. Tuck the ends of the newspaper into the tube.

5. Lay the straight edge near the edge of the clay slab. Cut the clay.

6. Mark the clay to show the length of the cardboard roll. Cut the clay again for a three-sided rectangle shape. Carefully set aside the scraps.

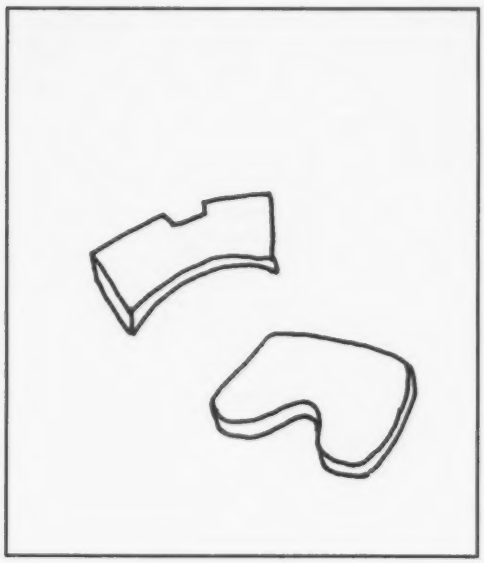


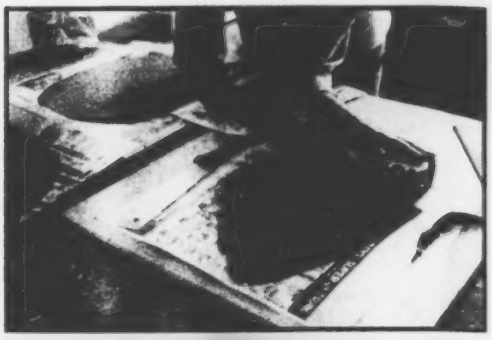
7. Place the tube on the measured clay and roll the clay slab around the tube. Mark where the cut clay side meets the un-cut side.

8. Cut the clay so that it goes just beyond the join. Join the clay edges gently to form a strong seam.

9. Even off each end of the cylindrical clay shape. Set the clay-covered cardboard tube up on end, to cut two circular end pieces. Plan each piece to be just a little larger than the diameter of the clay-wrapped tube.

10. Cutting the air-ducted mouthpiece from the scraps of clay is next. This may be decorative, a narrow strip about ¾" wide and 2" long. After cutting it, position it next to the tube and press it gently so that it holds the curvature of the cylinder. It is important that this mouthpiece dry slightly in this curved position.





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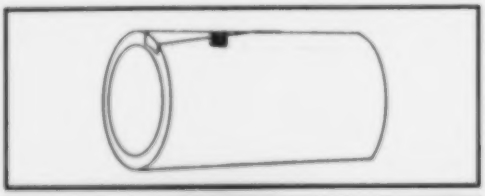
8

9

Leatherhard Directions

Before drying the ocarina to leatherhard, have the students mark all their pieces with initials so they can match their parts later. The mouthpiece and end pieces will dry faster than the tube. Watch the drying of all parts closely. If it is not possible to take an hour break and return to the greenware, wrap the clay carefully in plastic until a time when the ocarina drying process may be monitored. One must be careful in choice of the plastic. It must not have holes. Drying can be done by setting the large pieces out in the sun for an hour or so (leave the smaller end and mouth pieces indoors), or with fans and/or a hairdryer.

1. Gently remove the cylinder of clay from the newspaper-covered cardboard tube. If it is stubborn, hold the clay firmly and hit the tube on a hard surface. If it cracks at the seam, it can be mended with a score-and-slip technique.



2. Score-and-slip the two circular pieces, one to each end of the clay tube.

3. Next, students can prepare the ocarina body for applying the mouth piece. To obtain sound, the instructions for cutting the ocarina body and positioning the mouth piece are somewhat more precise. Begin by placing the mouthpiece on the ocarina body and tracing around it ever so lightly. Remove the mouthpiece and set it aside.

Score-and-Slip

Slip: In a small container, mix scraps of clay and water. Let the clay dissolve until the mixture is just thicker than pancake batter. Add some vinegar to make it a cream-like consistency.

Scoring: Use a sharp instrument to rough up or hatch *both* sides of the desired join.

Technique: Apply the slip to one side *only* of the desired join or seam. Gently position pieces together that have been scored and slipped. Twist until small beads ooze out of the join. Do not be too quick to clean up. Slip left on the crack or join keeps the seam moist longer. When you can touch the drying slip without it coming off, trim it.

Slot Sticks

To make a slot stick, taper the end of a piece of bamboo, popsicle stick, or tongue depressor. Slot sticks help one to align the mouthpiece with the airhole.

4. Have students flatten the area where the slot will be and taper it. Students are to make a little trough in the clay, not gouge deep into it.

5. Have students begin cutting the mouth aperature "window" on the small side. This will allow for corrections later if they cut the window off-center. Later they can make a big rectangular shape. The sound plays a little easier if they make it like this.

6. Now have the students position the mouthpiece on the area marked for its placement. Look at the ocarina from the top with the mouthpiece temporarily in place.

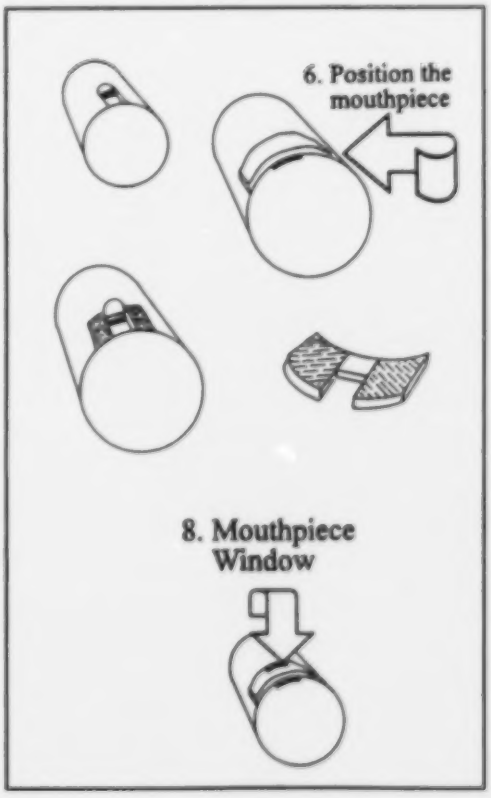
7. Have students make lines on the mouthpiece section so they can line it up later.

8. Now they can cut a hole in the mouthpiece section to correspond to the hole on the ocarina body.

9. Turning the mouthpiece over, the students score the inside curves on either side of the "wind" path to the aperature.

10. Finally, they score the ocarina "body" where the mouthpiece will be positioned.

11. Next, the students apply slip to the ocarina body and attach the mouthpiece. They should do this by pressing the mouthpiece firmly into place until the slip "beads" out of the join.



12. To line things up correctly, the students may position the slot stick into the slot and carve out the aperature with the stick in position.

13. They should look inside so that they don't cut too far. Then, it's time for them to proceed to clean up three sides of the "window." Clean underneath on all three sides. The side where the air comes out is ***not*** cleaned up.

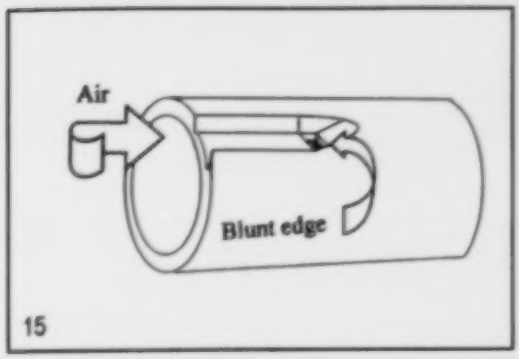
14. Have the students remove the slot stick and look through the window. The air must hit the edge and the edge should be blunt.

15. Students should test play the ocarina to see if any adjustments are needed to the mouthpiece to play. Now, the students are ready to cut the fingerholes.

16. Students might start by putting two fingerholes on either side of the axis formed by the aperature position. The holes can be different sizes or the same size. Just have them cut them clean and precisely for the best sound. The holes must be small enough so that each finger can cover the hole for which it was designed and must be positioned in such a way that the player's fingers can reach all the holes.

17. Position two holes on the back for the thumbs. Students should clean these holes too.

18. Trim off all the sharp edges, rounding slightly the parts that will go near the mouth. Students can test their ocarinas now, but encourage them to wait and not get carried away. The saliva carried on the air stream can soften and change the clay aperatures they so carefully designed.



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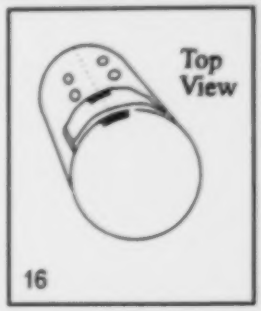

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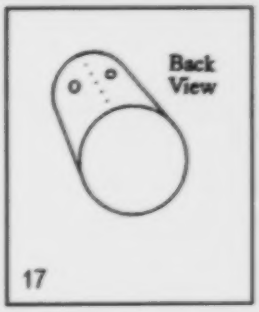

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19. To decorate, students can engrave or carve designs into the leatherhard instruments with sharp tools.

Finishing

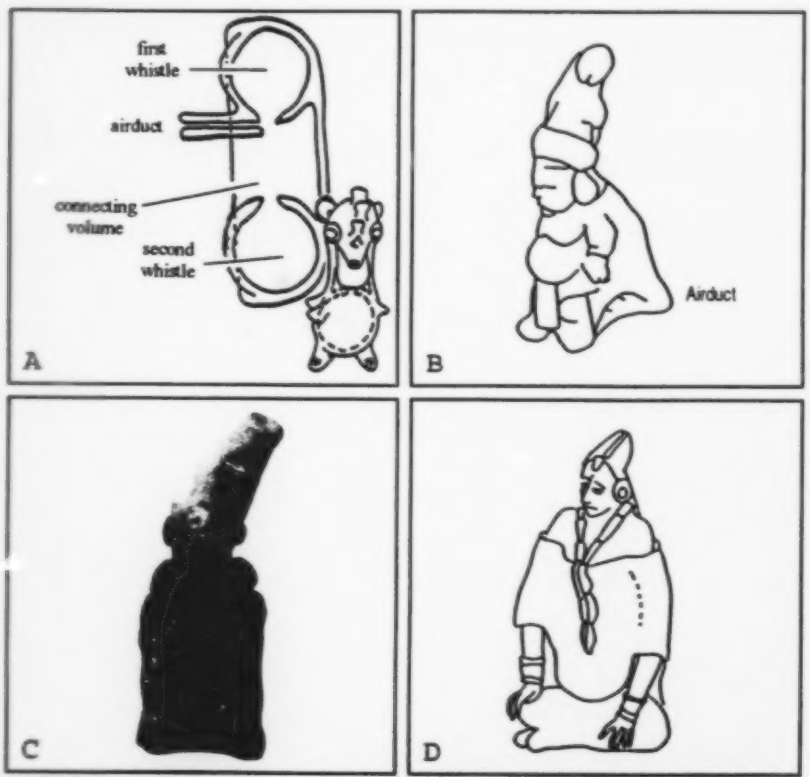
Before wrapping the ocarinas in plastic for slow drying, check again for student identification. A last name may be all that is needed and can be put on the base or the underside of the ocarina where it won't be visible when played.

Dry the ocarinas slowly. Fire them at cone 04 or cone 02. Depending upon your resources, have the students glaze, paint, or stain the musical instruments, and then collaborate with the music teacher in developing some performance pieces. Students must learn to listen to their instruments in order to learn to play them. And, best of all, the students can begin again, making other ocarinas or flutes.

Whistles from Jaina

Whistles from Jaina have been known to have multiple chambers with a single airduct assembly. The advantage of such a whistle is that it has more than one pitch. To accomplish this, the following must happen: there must be two whistles of a similar size with their apertures placed directly opposite each other, surrounded by a third open chamber. When the performer blows through the airduct, one chamber is activated. When the performer blows harder, the sound jumps to another pitch. The pitch can be lowered, within limits, by decreasing the open area of the surrounding chamber with the hand or fingers.[1]

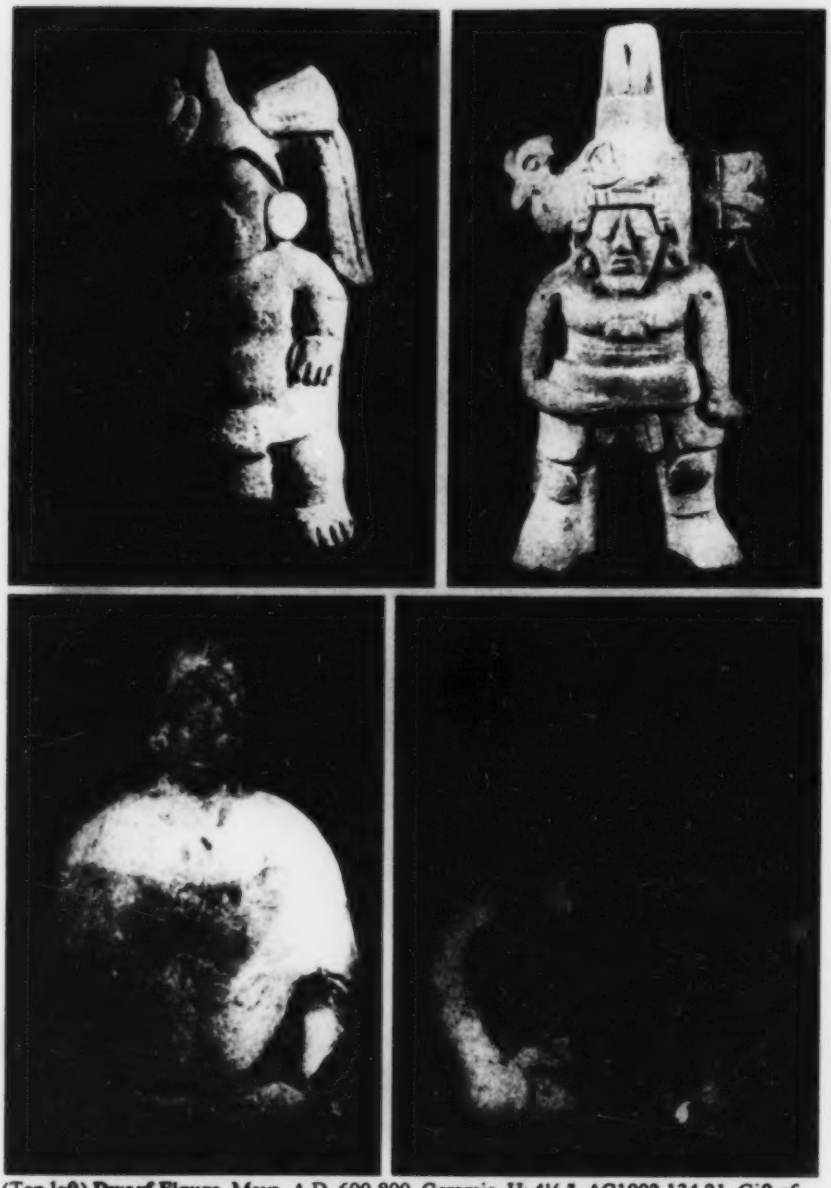
The clay whistle of a standing figure with tall hat has an airduct at the base, behind the legs, while the cross-legged woman has what appears to be an airduct in the part of her hair-do. The pottery effigy whistle/rattle in the form of a ball player from Jaina in the San Diego Museum of Man has a square vent hole and small slit mouthpiece on the reverse of the right arm. The seated female figure whistle from Jaina in the San Diego Museum of Man has a short stubby mouthpiece at the base with a rectangular vent hole above.



(A) Pitch-jump whistle: two whistles with one airduct and a connecting chamber. Jaina. A.D. 300-900. Drawings printed with permission of Susan Rawcliffe. (B and C) Drawing and photograph of Standing Figure with Tall Hat Whistle. Gray clay core with about ¼" of red clay on exterior. Jaina. A.D. 200-900. H: 5½" x W: 3" x D: 2". #91.45 (KS-427). Gift of Dr. and Mrs. Kenneth E. Stratton. © 1994 photograph courtesy Fresno Art Museum, Fresno, California. (D) Drawing of a clay whistle from Jaina. Collection of the Los Angeles County Museum of Art, Los Angeles, California.

[1] Susan Rawcliffe, "Complex Acoustics in Pre-Columbian Flute Systems," *Musical Repercussions of 1492*. Washington, D.C.: Smithsonian Institution Press 1993. p. 11.

Whistles



(Top left) **Dwarf Figure**. Maya. A.D. 600-800. Ceramic. H: 4½ ". AC1992.134.21. Gift of Constance McCormick Fearing. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California. (Top right) **Whistle in Form of Ball Player**. Jaina Island, Campeche, Mexico. Late Classic, A.D. 600-900. Pottery. H: 15.5 cm. x W: 7.7 cm. x D: 4 cm. 1985-33-12. © 1994 photograph by Linda L. Fisk, courtesy San Diego Museum of Man, San Diego, California. (Bottom left) **Noble Lady Effigy Whistle**. Clay. Jaina Island, Campeche, Mexico. Late Classic. H: 7". © 1994 photograph courtesy Bowers Museum, Santa Ana, California. (Bottom right) **Seated Man Whistle**. Clay with blue pigment. © 1994 photograph by *Art and Clarity*, courtesy Mexican Museum, San Francisco.

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Clay Whistles

Directions: [1]

1. Make a slab about ¼" thick. Cut two circles from the clay about 3" in diameter. Shape them into two shallow bowl shapes and set them aside, unassembled, until they are stiff and leatherhard. Score and slip the two bowls together, rim-to-rim.

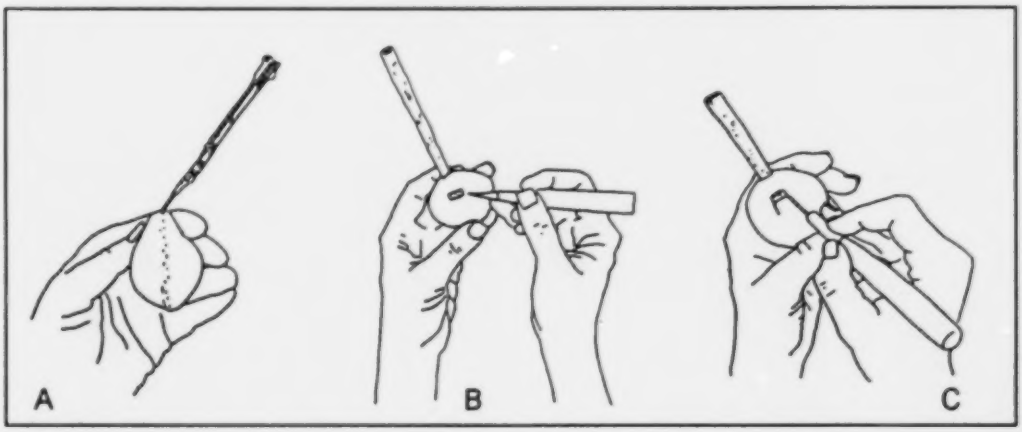
2. Attach extra clay at one end of the chamber for the mouthpiece.

3. To make the mouthpiece:

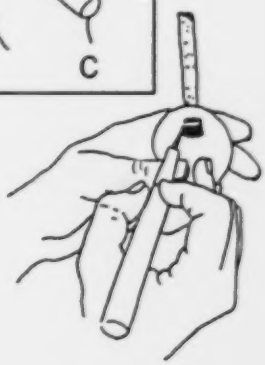
   A. Position and insert a slot stick at an angle in the thick end of the whistle chamber.

   B. While the slot stick is still in place, cut a small rectangular hole just above the end of the slot stick for an aperature. You must be able to see the slot stick.

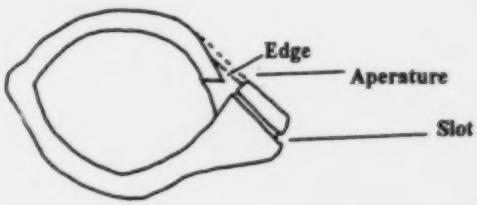
   C. From that rectangle, cut a wedge of clay carefully away from the thick part of the whistle chamber to make an "edge."



D. Remove the slot stick carefully.



Mouthpiece



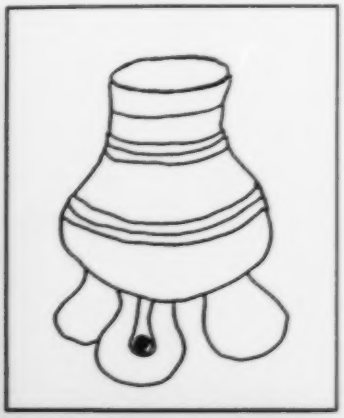
4. Try it out! If the whistle doesn't work, adjust the mouthpiece on the chamber again. Using a slot stick, you might make the slot larger or press the top of the slot closer to the stick. Remember, the air stream must hit the opposite side, the wedge-shaped edge, to make a sound.

5. Once you are satisfied with the sound you can add a hole or two or just leave it as it is. Set the whistle aside to dry slowly. Fire it. Decorate it. Play it!

[1] All drawings and descriptions by Ann Fuerst with permission from Susan Rawcliffe to use Rawcliffe's photographic illustrations marked fig 2-8. Insert A.

Rattles

Rattles were used by the Maya for music in rituals and ceremonies. There was even architectural decoration in the form of rattles—rattlesnake rattles, that is.[1] The clay pellets in the rattles were supposed to be formed of the ashes of the victims that had been sacrificed to the particular god in which they were deposited.[2] Rattles might be placed in lidded containers as well. Pictured below is a simplified drawing of plumbate glazed tripod container about 12" high which has rattles in the feet. That is, each leg is hollow and contains a loose ball about ¾" in diameter (shown solid in the drawing). Rattles have also been depicted on vase paintings as noise-makers.



(Left) **Pottery Effigy Rattle and Whistle**. Jaina Island, Campeche, Mexico. Late Classic, A.D. 750-900. H: 20 cm. x W: 11 cm. 1985-33-11. © 1994 photograph by Linda L. Fisk courtesy San Diego Museum of Man, San Diego, California. (Top right) **Drawing of tripod vessel**. Maya, Guatemala, Piedmont. Plumbate glaze over orange clay body. A.D. 900-1200. Los Angeles County Museum of Art, Los Angeles, California. (Bottom left) **Detail of Spectator with Rattles.** Vase painting (see pages 111-112). © 1993 photograph by Justin Kerr. Vase in collection of St. Louis Art Museum, St. Louis, Missouri.

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[1] Two architectural sculptural decorations of rattle-snake rattles more than a foot high on display at the Los Angeles County Museum of Art.

[2] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985. p. 179

Incense Burner

Incense Burner. Reddish Clay with traces of white and blue paint. Palenque Style, Chiapas, Mexico, A.D. 600-900. © 1994 photograph by Baru_h Rimon. Collection Israel Museum, Jerusalem

Incense, usually resin from several varieties of conifers, was ritually burned by the ancient Maya. They referred to the incense as *pom* or *copal*. The clay sculpture pictured here was an incense holder for the incensario itself, which would have fit into the open top of the cylindrical form.[1]

A large flat "halo" shape sets off the top of the sculpture of this important-looking figure. The maya artist carefully modeled the head, feet, and long-nosed headdress features, but used flattened coils[2] and pellets of clay for detail. Additional detail on the headdress and the five-tiered necklace was incised.

In formal portraiture, the Maya usually treated the man as if he were facing north. North and east were honorable directions and positive.[3] The left side and back were negative. He holds the most important royal symbol, a Manikin bar. A symmetrical composition is portrayed throughout except for the position of the manikin. The long skirt is tubular and ornamented with a pattern similar to that worn by Pacal on his sarchophagus lid and the dancers on the Buenavista Vase. His sandals have simple straps that wrap round the ankle.

The figure on a pedestal is placed against a decorative background which serves as a frame. Using symmetry, patterns, and textural variety, the artist sustains our interest in this fascinating art work.

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[1] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 167.

[2] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 163.

[3] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985 p. 56.

Textiles: Backstrap Weaving

Textiles were, and are, an important part of the Maya culture. By the time girls are twelve or thirteen they are skilled weavers. They may begin by weaving a small horizontal band or a few horizontal rows, but in most places they learn quickly to weave *huipils*, the main article woven on backstrap looms.[1]

Raw Materials

Cotton is indigenous to the area and was the favored plant fiber for weaving. They also weave with maguey for straps and bags, never for clothing. Wool is a favorite fiber in the highlands. Women use the backstrap to weave *huipils*, sashes, and skirts, and men use foot looms to weave the skirts or articles of clothing called *delantera,* worn around their hips.[2]

Spinning

It takes two pounds of wool to weave a *delantera*. A weaver can spin one pound of black wool and one pound of white wool, or a combination of the two to get gray wool. To get a fine thread a spindle is used. Spindles for cotton are straight, slender sticks, about 15 inches long. They have pointed ends and a clay whorl a few inches above the lower end. It takes about 15 seconds to spin and wind 35 inches of yarn.[3]

Dyes

Since the conquest, yarns have been dyed. Blue and red are the favorite colors. A garment such as the *huipil* woven in the traditional style will have dark blue geometric patterns set against a red ground.[4] In Mesoamerica, the plant from which indigo for the blue is extracted is *Anil* (*Indigofera*

Fabric woven on a Backstrap Loom. Photograph courtesy San Diego Museum of Man, San Diego, California. **Backstrap Weaving.** This backstrap weaver, Rafaela Aspen-Godinez of Guatemala, sits upon the ground to weave. The rope-like belt behind her is the backstrap anchored to her loom. Photographs by Ann Fuerst.

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[1]Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. xvi.
[2]Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 119.
[3]Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 5.
[4]Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 138.
Today in San Martin Sacatepequez (Guaremala) the two panels of the *huipil* are woven in one loom setup. Each panel has three selvages. The *huipil* is 26" X 30" wide. It is open on the sides, except for a 3" long section that is sewn together under the armholes. The warp consists of three red singles, the weft of six red singles. At the end selvages the wefts are extra strong. The thread count is 44 warps and 19 wefts per inch.

suffruticosa). It is reduced in a vat with the *sacatinta* plant (*Jacobinia spicifera*). The ground indigo and the green leaves and stalks (and today some synthetic dyes) are steeped in a vat. After a few weeks the mixture will ferment and the dyer will strain the liquid and be ready to use the dye.[1] A different process is used for red dye. Red comes from an insect: *cochineal* (*Dactylopius coccus*). The insect is "planted" on Nopal cactus. A whole plantation of insects can be harvested from one cactus. It takes 2-6 ounces of cochineal to one pound of wool for the dye bath.[2] That's about 12 ounces for a *delantera.*

Weaving

Warping Frame

To prepare the yarn for the loom, the weaver drives about three sticks into the ground for a measure. The distance from the first to last warping peg is equal to the length of the warps when they are placed on the loom.[3] When the warping is done, the fibers are sized in a solution of corn dough dissolved in hot water. Sizing makes the warp stiffer, stronger, and smoother.[4] Sometimes the sizing process causes the warp to shrink. The next step is dressing the loom.

The Loom

The backstrap loom is made from a few sticks, a rope, a backstrap, and string. When not in use, it can be rolled up and stored easily.

Rope. The rope is used to attach the loom to a stationary object. Tie the rope so that both ends of it are the same length, and the upper end bar is horizontal or parallel to the ground.

End bars. Attach the warp yarns to the end bars. When weaving the warp must be under tension. The weaver regulates the tension of the warp by leaning forward or backward. End bars usually vary according to what is to be woven: skirts (38"), huipils (32"), and belts (18").[5]

Backstrap. Most backstraps are made from maguey-fiber cord or occasionally from leather. The weaver places this strap behind her back.

Shed roll. The shed roll is cylindrical and separates the warp threads. They are made of bamboo or other light wood.

Heddle. The heddle is cylindrical and changes the shed on the loom. By lifting the heddle stick, the heddle-controlled warps are raised above the warps that pass over the shed roll.

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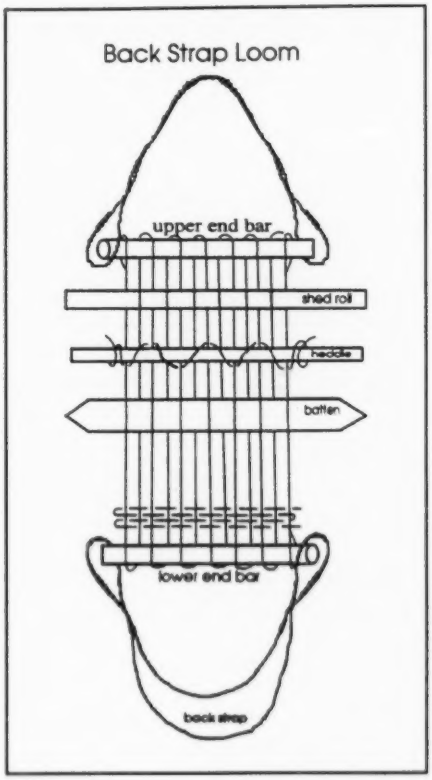
[1] Ann Hecht. *The Art of the Loom.* New York: Rizzoli. 1989. p. 166.
[2] Ann Hecht. *The Art of the Loom.* New York: Rizzoli. 1989. p. 166-167..
[3] Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 17.
[4] Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 27.
[5] Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 30.

Batten. A batten made for weaving huipils might be made from light wood like pine about 36" long and 2" wide. They are used to open the shed so the bobbin of weft thread can pass, and to batten down the weft onto the cloth or web.

Bobbin. Most bobbins are simple sticks used to carry the weft yarn through the shed. In some communities where the weft is hand-spun, the spindle is used as a bobbin. Pointed sticks with slits and reed bobbins with forked ends have also been used.

Process:
The basic steps of backstrap weaving are: 1) establish shed 2, 2) put a weft into shed 2, 3) batten down the weft, 4) establish shed 1, 5) put weft into shed 1, and 6) batten down the weft, and return to step 1 again.



The Fabric:
Since very few examples of pre-Columbian Maya clothing exist, one of the best sources for studying pre-Columbian Maya textiles is clay figurines. When studying these figurines, scholars can study the front, back, and base of each costume. There are at least five categories of costume: draped, slip-on, open-sewn, closed-sewn, and fitted.[1] Only the closed-sewn will be discussed here: a garment that is closed on the sides to form a sack, with openings for the head and arms. The woman's ***huipil*** and the man's tunic or sleeveless shirt are this type. They are constructed from one to three webs of cloth to make a rectangle.

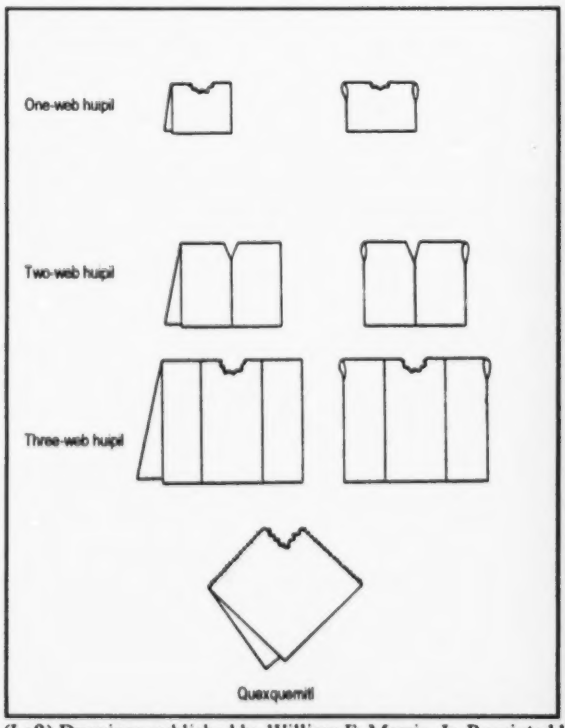
[1] Walter F. Morris, Jr. "Fall Fashions: Lagartero Figurine Costume at the end of the Classic Period."*Fifth Palenque Round Table*, Vol. VII, 1983. p. 245.

Time

Perhaps the easiest and least time-consuming part of backstrap weaving is the weaving itself. For a sash or a *huipil* panel, winding the yarn into balls can take 1½ (for the former) to 3 hours (for the latter). Warping can take 2 to 4½ hours. Setting up the loom is 3 to 3½ hours. The weaving itself takes 4 to12 hours. Weaving the join and finishing takes another 2 hours. A sash might be 14 hours in the making,[2] and each panel of a 2 panel *huipil* could take 25 hours.[3]

Fabric Decoration

From images on polychrome pottery[4] and stone sculptures we know the Maya elite loved to wear decorated clothing. But the only decorative technique for which there is real evidence is painting.[5] Some of the same designs appeared on deerskin capes and on togas. There may have been embroidery because bone needles were found in at least one ritual deposit, but no examples are yet known.



(Left) Drawings published by William F. Morris, Jr. Reprinted by permision. The *Quexquemitl* was an upper-class ritual garment, whereas the huipil was worn by commoners. (Right) **Standing Female Figure.** This figure from Campeche, Mexico, wears a *Quexquemitl*. White-slipped clay with traces of blue paint. Late Classic. A.D. 550-950. H: 8¼". L83.11.661. Lent by Constance McCormick Fearing. © 1994 photograph courtesy Los Angeles County Museum of Art, Los Angeles, California.

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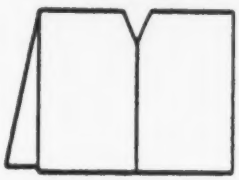
[2] Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 84.
[3] Norbert Sperlich and Elizabeth Katz Sperlich. *Guatemalan Backstrap Weaving*. Norman: University of Oklahoma Press. 1980. p. 86.
[4] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. pp. 131, 1, 8, 15, 26, 48, 39, 52, 213, 255, 257,
[5] Walter F. Morris, Jr. "Fall Fashions: Lagartero Figurine Costume at the end of the Classic Period, "*Fifth Palenque Round Table*, Vol. VII, 1983. p. 251.

Name • Nombre_____ Date • Fecha _____

Pairs of Maya Costumes • Atuendos mayas por pares

Indicate what is common to each pair of costumes and the differences between them.
• Indique qué tienen en común cada par de atuendos y qué diferencias existen entre ellos.

HUIPIL



Common:_____
En común:_____

VEST • CHALECO

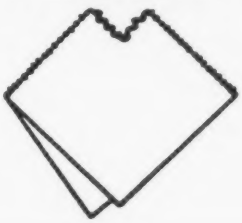
Different:_____
Diferencias:_____

Different:_____
Diferencias:_____

HUIPIL

Common:_____
En común:_____

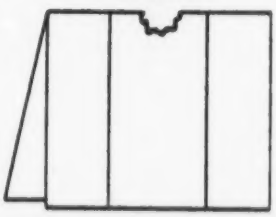
QUEXQUEMITL



Different:_____
Diferencias:_____

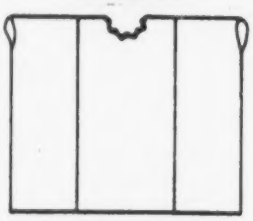
Different:_____
Diferencias:_____

HUIPIL



Common:_____
En común:_____

HUIPIL



Different:_____
Diferencias:_____

Different:_____
Diferencias:_____

Drawings printed with permission of artist Walter F. Morris, Jr. • Los dibujos han sido reproducios con el consentimiento del artista Walter F. Morris, Jr.

Name • Nombre_____ Date • Fecha_____

Designer Clothing • Ropa de moda

Draw your own seated Maya man or woman, or dress the figure resting here. Use colors, textures, lines, and shapes to be inventive with designs for hairdos, headdresses, capes, wrist and ankle bands, earplugs, aprons, belts, and other garments and accessories.

Dibuje Ud. mismo un hombre o una mujer maya, o vista la siguiente figura sentada. Sea creativo, usando colores, texturas, líneas y formas al pintar el peinado, el tocado, la capa, las pulseras de muñeca y de tobillo, las orejeras, el delantal, el cinturón y demás artículos de vestir y sus accesorios.

Name_____ Date_____

The Maya Clothes Closet

Would you be able to identify the clothing hung up in a Maya clothes closet? Do you think you could tell if the clothing belonged to a man or woman? Most of what we know about the garments worn by the people of this ancient civilization was not found in closets or thrift stores, or even their tombs. We have learned about their clothing from paintings on pottery vases, figurines, and carvings on stone. Look at paintings and sculptures of the Maya and see if you can sort their clothing. Illustrate parts of your lists.

Walk-in-Closet Art

Ancient Clothing of the Maya		Contemporary Clothing of _____	
Male	**Female**	**Male**	**Female**

Nombre_____Fecha _____

El armario del vestido maya

¿Podría Ud. identificar la vestimenta que se encontraría en un armario maya? ¿Cree que podría Ud. decir si pertenecían las prendas a un hombre o una mujer? Casi todo lo que sabemos sobre el atuendo usado por esta antigua civilización no fue encontrado ni en roperos ni en tiendas saldos, ni siquiera en tumbas. Sabemos de éste a través de los dibujos que se encuentran en las vasijas y en las esculturas de piedra. Vea las pinturas y esculturas mayas y trate de describir su vestimenta. Dibuje algunas prendas de su lista.

Arte de armario

Vestimenta maya antigua		Atuendo contemporáneo de _____	
Masculina	Femenina	Masculino	Femenino

Headdresses

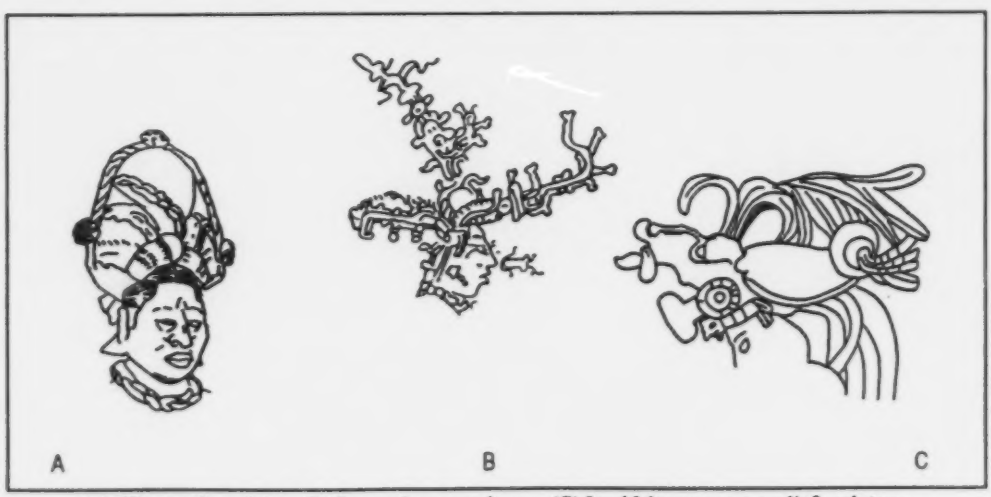
No matter what the media, the Maya artists were always creating the most remarkable headdresses. In this activity, students will draw pictures of Maya headdresses, then make one of their own, or for a member in their group. One scholar surmises it was very likely that the Maya used a basket to support the very elaborate feather-work of their headdresses.[1] But your students could even use hats, or flour, water and paper (papier mache forms).

Materials:

a baseball cap or visor for the headdress support, glue gun, colored paper (for feathers), masks, classified ads (the small print will take on the look of mottled feathers with a little paint), scissors, paint, paint brushes, feathers (if available), ribbons, buttons, and flowers

Directions:

1. Examine with students some of the amazing headdresses and head coverings worn by the Maya. Be sure to look at frontal views of clay whistles and other effigies as well as profiles in vase paintings. Note the projections that come forth out over the front of the body as well as extensions towards the back and sides of the head.
2. Anchor the headdress support firmly to a portable surface so that it may be moved easily while being created. A wig stand or hat stand would be ideal.
3. Have students cut, shape, and paint the basic support first. Consider strengthening parts of the support where extra stress will be placed as a result of the decorations. For example, heavy Maya ear plugs might be sewn right onto flaps near the ears.
4. Assemble the headdress. Put them on display for all to see after they have been on parade! How about hanging them from the classroom ceiling—if they are fire-proofed.



(A) Woman from Jaina. (B) Buenavista vase dancer. (C) Lord Macaw as on a relief sculpture.

[1] Herbert J. Spinden. *A Study of Maya Art.* Toronto, Ontario, Canada. Dover Publications, Inc., 1975. p. 147.

Books

As early as A.D. 500, the Maya were making paper from the pounded inner bark of fig trees to use in book making. The pages were bonded with natural gum and coated with gesso, a fine plaster covering. The pages about six meters long were folded into parts like a concertina.[1] The Maya artists illustrated their books with elaborate pictures, painted in brilliant colors. The best example of Maya illuminated manuscript is the one in Dresden. It was not written by one person because some of the drawings are very delicate and smooth and others are rough. It is even possible that each subject in the book was by a different author and artist.

The pages in the Dresden book or Codex were usually divided into three horizontal sections. These three parts were divided again into three vertical sections. Figures associated with glyphs and numbers were usually drawn in each of the nine parts.[2]

Matthew Looper

Some topics for Maya books are:

- creation stories
- prophesies
- acts of the gods
- crop cycles ("Farmers' Almanac")
- astronomical calculations
- histories
- biographies
- atlases
- almanacs
- calendars

Censorship

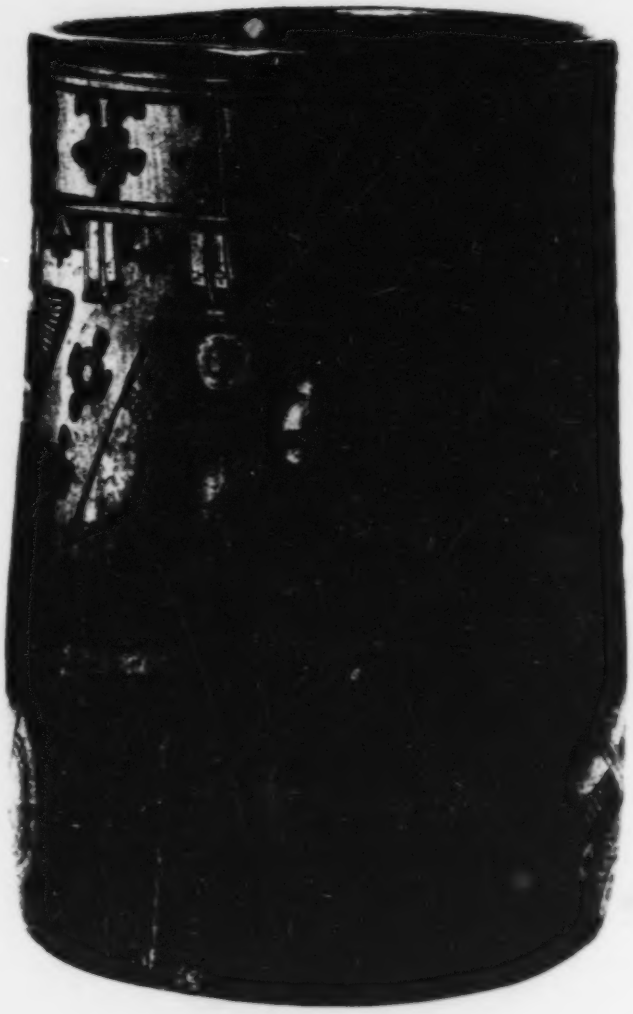
After the Spanish occupation, Friar de Landa ordered the destruction of all the books written by the Maya. He believed they were the instruments of the devil and had the books burned.

Only four of the hundreds of books that were written are known today. They are preserved in museums in the cities of Dresden, Madrid, Paris, and Mexico City. On a separate paper, write and illustrate your own story using one of these topics.

- Why would a colonizer want to destroy the precious items and ideas of people they have conquered?
- How do you think the books traveled from the land of the Maya to those four cities?

[1] Natascha Norton and Mark Whatmore. *Central America*. London: Cadogan Books, 1993, p. 37.
[2] Herbert J. Spinden. *A Study of Maya Art*. Toronto, Ontario, Canada: Dover Publications, Inc., 1975. pp. 152-154.

DESIGN 7



Cylindrical Vessel. Maya Culture, Ulua Valley, Honduras. A.D. 600-900. Orange slipped clay with light brown paint. Photograph Y. Lehmann. Maremont Collection. © 1994 photograph courtesy Israel Museum, Jerusalem, Israel.

Design

(While displaying the picture on the other side of this page to the students, you may find it helpful to refer to the text and questions on this side of the page.)

Design refers to the structural elements of art such as line, shape, form, color, texture, space, and movement, and the principles by which these elements are organized, such as rhythm, balance, emphasis, proportion, unity, and variety. The formal analysis of a work of art involves a discussion of the work's design. Design also encompasses the discussion of visual qualities such as bright-dull, rough-smooth, and agitated-serene.[1]

Can you find any way to describe the way the design has been divided?

_____

_____

This cylindrical vase has many different design elements and principals of art. The artist has divided the vase decoration into three parts. There are two bands with rhythmic pattern at the top of the vase and a scene with a seated figure leaning forward in the lower part.

Describe the rhythmic patterns used by the painter.

_____

_____

_____

The way this picture is organized affects our feelings about it. The number of motifs in the upper band is smaller than in the band below it. Because there are fewer shapes at the rim, and they are all identical, the rhythm or pace seems slow and monotonous. Underneath there is a band with more variety. The relationship of the figure to the ground has more variety because there is some overlapping of plain shapes on heavily textured (net-like) areas.

How does the way this picture is organized affect your feelings about it?

_____

_____

The scene of the seated figure, is very intense because the tiny little feather-like forms are repeated in a variety of directions and positions. The movement one experiences comes from the rhythm of the curved shapes, the diagonal band, and the arm rather than any action in the scene. The contrasts created by the light figure on the dark ground also gives this vase an expressive quality of excitement.

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[1] Arthur Efland. *Planning a Balanced Comprehensive Art Curriculum*. Second Edition. Columbus, Ohio: State of Ohio Department of Education, 1992. p. 20.

Name_____ Date_____

Museum name_____

Aesthetic Response to Sculpture through Design

There are many ideas about what makes the viewer have an aesthetic response when looking at a work of art. This gallery sheet is written from the point of view that the aesthetic meaning of a work of art is in what the Maya artist has done on the stone or wood in his/her use of line, texture, volume, form, and arrangement of these and other elements with rhythm, contrast, balance, emphasis, and variety.[1]

1. Look at the sculpture for the artist's use of the elements and principles of design. What do you see? Be specific and precise.

balance	form	texture
color	line	value (light/dark)
contrast	rhythm	variety
emphasis	shape	volume

_____

_____

2. Look for the results of the specific relationships created. How does the lighting affect the volume? What is the relationship of the textures to their spatial arrangement?

_____

_____

3. What is the artist's design in this sculpture, his/her overall purpose? How did the artist use line, texture, volume, space, rhythm, contrast, balance, emphasis, and variety to achieve it?

_____

_____

4. Is the artist's sculpture unified? Is there sufficient variety to maintain your interest? Explain.

_____

_____

5. Explain what you think the artist is emphasizing the most: telling a story, being decorative, or expressing a feeling. _____

_____

_____

[1] This gallery sheet adapted from Barbara P. Suplee, "Gallery Sheet," The Barnes Foundation, 1994 presentation National Art Education Association. See also Marcia Muelder Eaton, *Basic Issues in Aesthetics*. Belmont: Wadsworth, Inc. 1988.

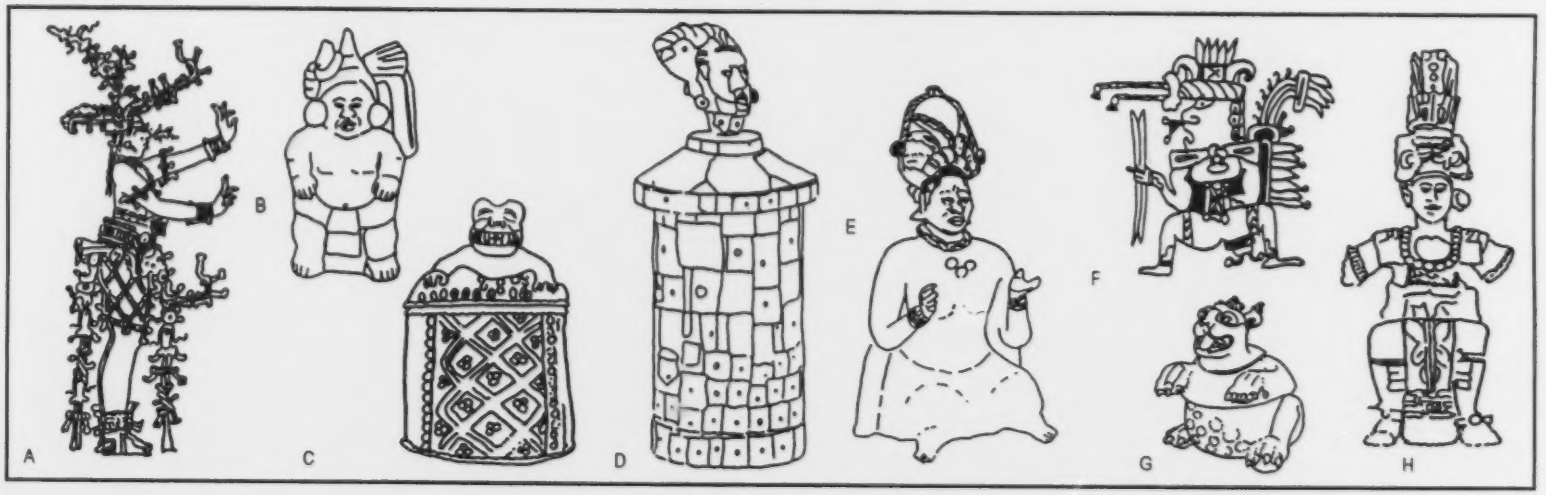
Name_____ Date_____

Symmetry in Maya Art

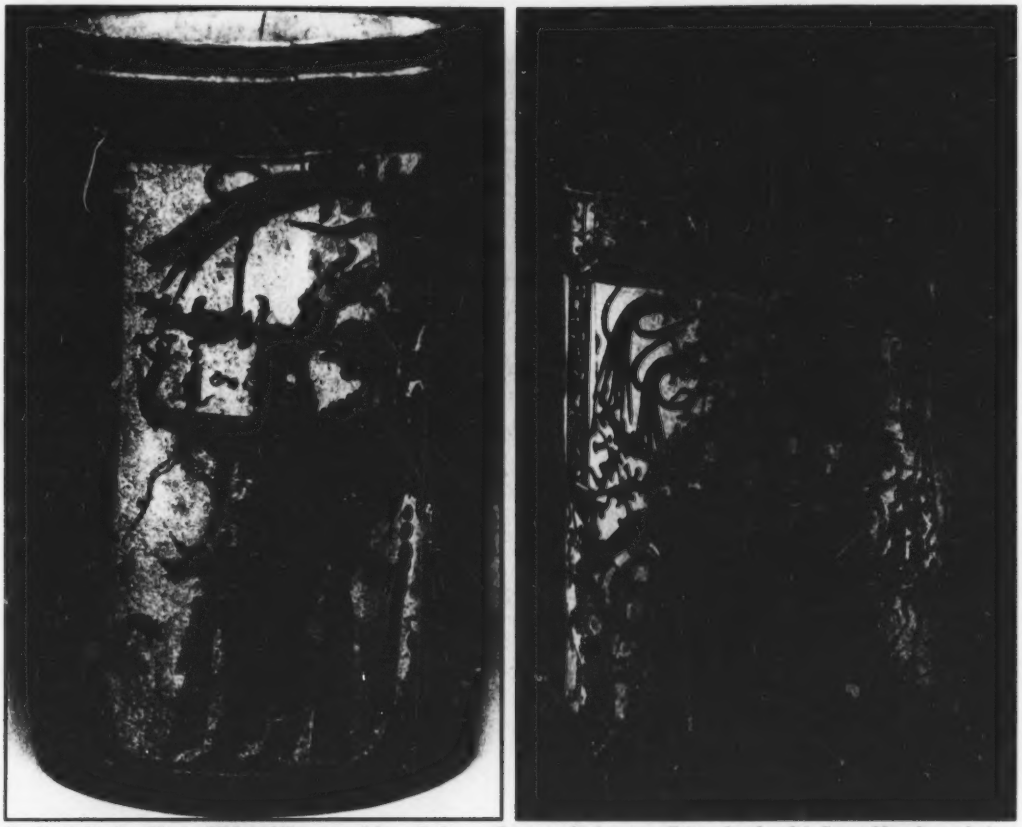
Look at the images below for different kinds of symmetry. A number of images on this page are symmetrical. Some of these art forms if viewed "head-on" would have one line of symmetry, identical patterns on either side of a vertical line or a horizontal line. Other images have two lines of symmetry. Correctly identify two of the images with the types of symmetry they have. Describe the patterns that repeat in each art work you select. Keep in mind you must imagine these forms as if they were being seen "head-on."

check one or more of these three boxes

Letter (below) of Maya Imagery	Vertical Line Symmetry	Horizontal Line Symmetry	Vertical and Horizontal Symmetry	Description of Symmetrical Patterns



Style 8



(Left) **Cylinder Vase: Holmul Dancer**. Maya Culture, Guatemala (eastern Péten lowlands). Late Classic period, A.D. 550-900. Earthenware with bichrome decoration. H: $9^{5}/_{16}$" x Diam.: $5^{3}/_{16}$". #4011985. Anonymous loan. © 1994 photograph courtesy Museum of Fine Arts, Boston, Massachusetts. (Right) **Vase of the Dancing Lords**. Naranjo, Guatemala. Ah-Maxam, artist. A.D. 750-800. 1986.1081. Ethel T. Scarborough Fund. © 1994 photograph courtesy Art Institute of Chicago, Chicago, Illinois.

Style

(While displaying the pictures on the other side of this page to students, you may find it helpful to refer to the text and questions on this side.)

Style refers to the name given to a group of works seen as belonging together because they resemble each other in some particular way. Works in the same style share a common formal design, subject matter, theme, or function. Style names could be Holmul, *Ik'*, atole cups, or even the style of the royal artist Ah-Maxam.[1]

Pictured here are two examples of the Holmul style.

1. In how many ways do you think these two vases resemble eachother?

_____

_____

They share a common formal design, Primary Standard Sequence is used by both on the rims, they have the same subject matter of dancers and dwarves, they have the same function as funerary drinking vessels for *cacao*, they are made in the same medium of clay, and their design is similar with dark figures painted on a light-colored ground on cylinders with tall straight walls.

2. Do you think there are any advantages in owning something in the same style as another thing you own? Should museums own more than one art form in a particular style? Explain.

_____

_____

_____

_____

3. Is there anything more appealing about the way one artist worked in the Holmul style than the way the other artist worked?

_____

_____

_____

_____

4. Describe the parts of this style that do not appeal to you. (Show the students the cover design of this book as another example of the style.)

_____

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_____

_____

_____

_____

_____

[1] Arthur Efland. Planning a Balanced Comprehensive Art Curriculum. Second Edition. Columbus, Ohio: State Department of Education. 1992. p. 20.

The Maya Style

The Maya style can be seen on sculpture and painting as "predominately linear, expressive, and descriptive, based in naturalism, and using overlapping forms in densely packed compositions."[1] One of the first places where this is seen is in the text on their art forms. A pattern of rectangular-like glyphs are used by the Maya artists on almost everything. The glyphs pictured below were carved on a stone monument.

Drawings of glyphs on Monument 2 at Quiriguá reprinted through the courtesy of the artist Mathew Looper.

Densely Packed Compositions

Note the way the Maya packed some of their compositions with people, animals, objects, and parts of each, in composite and hopelessly interlocked ways. The use of overlapping is unique in pre-Columbian art. Other cultures placed shapes next to one another.[2]

Linear

Perhaps one easy way to describe the Maya painting style, as seen in vase painting, is that it is a "coloring book" style. Naturalistic-looking and abstract objects are usually painted with dark visible outlines, and filled in with solid colors. The lines are consistently thin with the same thickness throughout a composition. The Maya artist also liked naturalistic detail.

Narrative

In the western areas of the land occupied by the Maya, in the areas of Yaxchilán, Jaina, and Bonampak, the Maya created a narrative style in context with their architecture and vase painting. Narrative means the image appears to be one moment from a series of related actions—a moment carefully chosen to evoke the entire story. Sometimes a single figure is represented this way and other times two or more figures are depicted interacting in a variety of mundane, historical, or mythical events. These are unique events.

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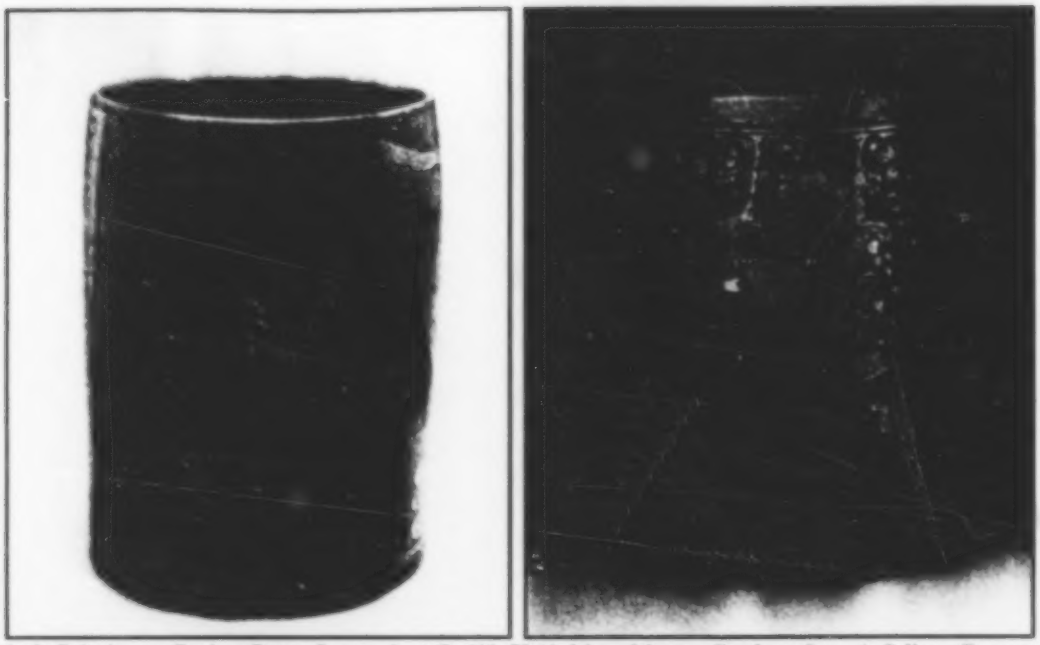
[1] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985. p. 65.
[2] Charles Gallenkamp and Regina E. Johnson, general editors. *Maya Treasures of an Ancient Civilization*. New York: Harry N. Abrams, Inc., 1985. p. 65.



(Left) **Polychrome Beaker**. Peten, Guatemala. A.D. 600. 78.41. **Maya**. Museum Purchase, Leon A. Salinger Bequest Fund. © 1994 photograph courtesy of The Fine Arts Museums of San Francisco, California. (Right) **Cylinder vase: Itzamna and the Hero Twins**. Maya Culture. Central Campeche (?), Mexico, A.D. 593-830. Earthenware with red, white and black on yellow-cream slip. H: 20 cm. D: 17 cm. #1988.1169. Gift of Landon T. Clay. © 1994 photograph courtesy, Museum of Fine Arts, Boston, Massachusetts.

Vase Painting Styles

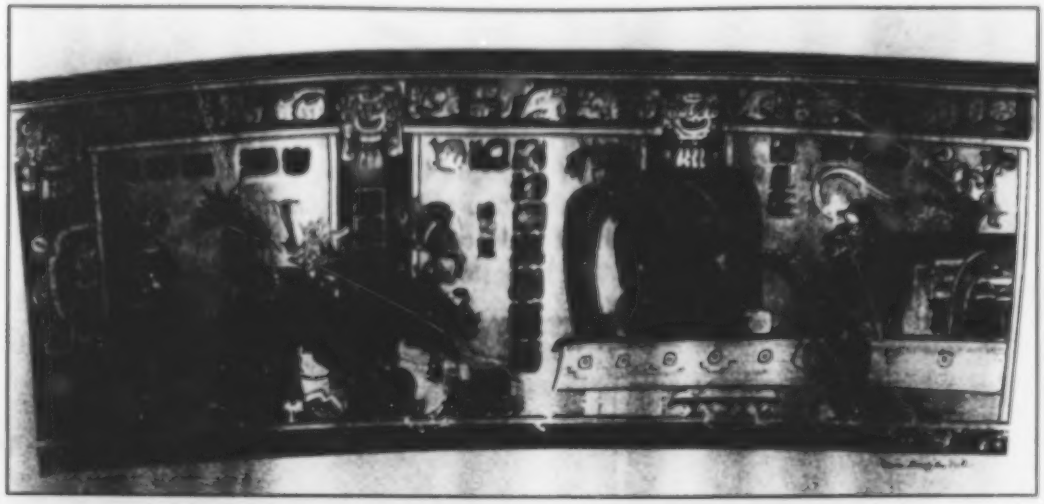
Researchers have identified many painting styles used by the Maya on pottery. A few of these styles are given in this book. Some have very beautiful images, and others are very simple. Among the painting styles are the *Ik'* and Holmul. The two vases pictured here are examples of the narrative style in vase painting. On one vase there is a palace setting where we can actually see the speech-scroll emanating from the mouth of the seated figure with a tall white hat.

Ik' style

The most important pre-Columbian site associated with the *Ik'* painting style is Motul de San José. The pottery is very important because all the other monuments from this region are uncarved or eroded. Fortunately, these vessels, which served as burial offerings, social currency and elite service ware, record the names, portraits, and events from this area. The *Ik'* style is late Classic. The artist who has been identified most with this style is the "Master of the Pink Glyphs." He acquired this name from his style of painting rose-colored glyphs on the rim of the pottery.

Already scholars have identified 38 vessels associated with the *Ik'* style. The pottery is recognized for its historical pictures of the elite on a bright white background, black-painted rims, and glyphs outlined in a dark rose color. The potters are not known to have made any plate forms.[4] On the next page there are two vases of the *Ik'* group with scenes of historical events taking place inside a palace.

[4]Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 172.

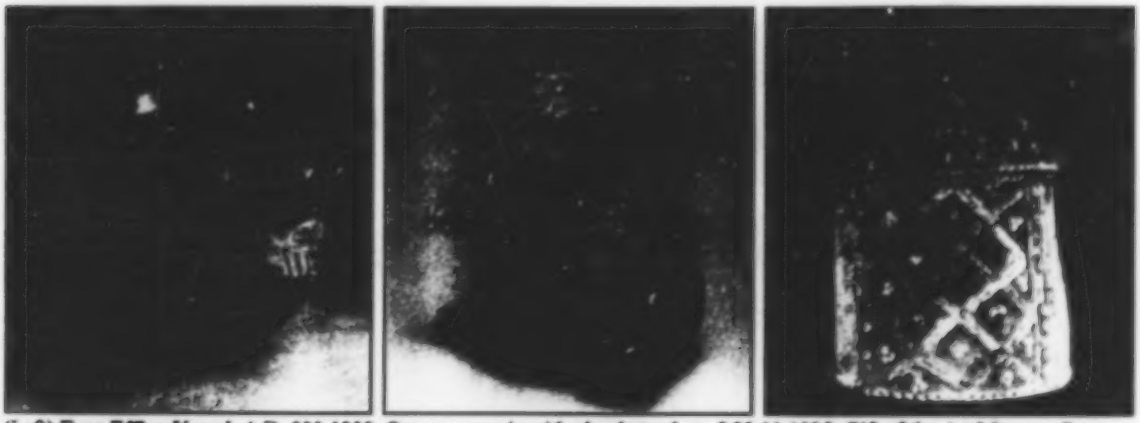


(Top) **Cylinder Vase**. Motul de San Jose Region, Guatemala. A.D. 672-830. Ceramic with red, rose, orange, white, brown and black on cream slip. H: 20.2 cm. x Diam.: 16.4 cm. B-564. MAP. Roll-out painting by Diane Griffiths Peck. © 1994 photograph courtesy Dumbarton Oaks Research Library and Collections, Washington, D.C. (Bottom left) **Cylinder vase: Tribute Payment.** Maya Culture, Guatemala (central Petén lowlands; the *Ik'* site region located on western edge of Lake Petén-Itza). Late Classic period, A.D. 500-900. Earthenware with polychrome slip decoration. H: 16.5 cm. D: 14 cm. #394.1985. Anonymous Loan. © 1994 photograph courtesy, Museum of Fine Arts, Boston, Massachusetts. (Bottom right) Primary view of the same vase in the roll-out painting above.

In these vase paintings identified with the *Ik'* style, the detail and naturalism are delightful. Knots are tied in fabric curtains and even the corpulent ruler (right) named Lord Completion-Star seated cross-legged on a platform, with long fingernails and eyelashes, is painted with unforgiving scrutiny. He raises his hand as he receives tribute payment from those elite figures seated on the floor before him. Informally seated cross-legged, or kneeling on their knees, the Maya elite were represented over and over again in similar positions, usually with frontal bodies and profile heads. This is a characteristic of the Iconic style in Maya art forms.

Holmul

The first vases in this regional style were excavated in 1911 at Holmul (see cover story). Ah-Maxam is one of the royal artists associated with this style. While the Holmul style is characterized by a red-and-orange-on-cream palette with high-lights of other colors, Ah-Maxam also painted with just black-on-cream slip (see page 242). Detached contour lines were also characteristic of this style for depicting human figures. The subject matter in this style ranged from aquatic birds to enthroned dignitaries and dancers. Vessels in this style usually have hieroglyphic texts in the PSS (see page 204-208). The pottery was used by the elite and the common folk.



(Left) **Frog Effigy Vessel**. A.D. 900-1200. Orange ceramic with plumbate glaze. L83.11.1025. Gift of the Art Museum Council. © 1994 photograph courtesy of Los Angeles County Museum of Art, Los Angeles, California. (Center) **Lidded Jaguar Vessel**. Maya, Northern Peten, Guatemala. 3rd century A.D. Earthenware and pigment. H: 9½". 1982.42 a-b. Museum Purchase, Wattis Fund, AOA Acquisition Fund, William H. Noble Fund, and C. Barry Randell Fund. © 1994 photograph courtesy of the Fine Arts Museums of San Francisco, California. (Right) **Cylindrical Jar with Jaguar Effigy Cover**. El Quiche, Guatemala. Late Classic Period. A.D. 600-900. Unpolished red-brown clay with red, blue, black, and yellow paint. H: 5½" (with lid) x Diam.: 11". F78.75.14. Bowers Museum Foundation Collection. © 1994 photograph courtesy of Bowers Museum of Art, Santa Ana, California.

Applied Clay Style

Some of the most delightful pottery shapes created by the Maya were in a style which had applied clay shapes such as heads and parts of animals and humans. Sometimes these heads were hollow with a rattle inside (a small ball of clay). The frog effigy vessel is a beautiful piece with a metallic-look created by the plumbate glaze on the orange clay body. The lidded jaguar vessel is so charming because the sculptor has depicted the animal with lots of detail in a position of begging for food or attention. The cylindrical jar with jaguar effigy cover has a marvelous little jaguar painted yellow sprawled on the top of the lid. In the first and last, the shape of the container is more important. In the design of the second, however, the shape of the container is not as important as the animal.

Summary

The Maya style has general characteristics for all its art forms as a whole. It is also subdivided in many ways in sculpture and painting. They used many symbols to communicate to others including glyphs which appeared on both sculpture and painting. As scholars discover more about the mysterious Maya, we may find our understanding of the style will acquire greater depth.

Who are the Maya Artists?

The finest of the Classic Maya artists were those who had mastered everything. That is, the artist was "a man of learning, one who had mastered painting techniques and pictorial conventions. He was a literate person in command of Maya history, cosmology and religious knowledge. His creative abilities imbued him with exceptional power linked to that of the creator deities."[1] One artist/scribe was buried at Tikal in a vaulted tomb containing wonderful offerings of art and artist's supplies.[2] You can identify a Maya artist by what he/she wears or holds.

The Maya Artist

Wearing apparel and appearance:

male (no known female signatures)
long hair elegantly wrapped in a simple cloth (a paint brush stuck in the wrappings sometimes)
a turban-like spangled headdress made of cloth
deer ear tucked behind the artist's ear
a symbol coming from the artist's mouth or under his arm called the "print out" icon[3]

Things held:

poised paint brush
- hair brushes attached to hollow tubes
- a stiff shaft with a soft pointed end
- stylus (no change in appearance from tip to end)

paint container (conch shell, cross sectioned)

A vase beautifully painted by a great artist could function as social currency. In some cases, the artist's signature on the pottery made the vessel more valuable. An artist's signature would include his name and the social titles that identified him as a member of elite Maya society, even the son of a ruler. One example is the work of *Ah-Maxcam*, a royal artist from Naranjo. He signed the Vase of the Water Lilies with his name in the diagonal text. The glyphs around the base explain that the artist was the son of late-eighth-century Ruler 4 at Naranjo, known as Lord "Flint-Face."[4] Certain painting styles also made the pottery valuable. If one could recognize an artist's creative style, even though it was not signed, the work was still considered valuable. The more accomplished artists painted:

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[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 50.
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 57.
[3] the print out icon probably represents a piece of material that books were made of: *amate* paper. Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 43.
[4] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 319.

One of several outstanding vases painted by Ah-Maxam, a royal artist from Naranjo. Vase of the Water Lilies. Ceramic. c. 8th century A.D. Mesoamerica, Guatemalan, Peten, vicinity of Naranjo site. Classic Maya Culture. H: 24 cm. x Diam.: 15 cm. Ethel T. Scarborough Fund, 1986.1080 primary view. © 1994 photograph courtesy Art Institute of Chicago, Chicago, Illinois.

1. fancier versions of glyphs and more phonetic signs rather than the less theatrical geometric versions of these signs. They used more head variants.
2. with more developed calligraphic styles,
3. blessings on their pottery to affect three things: the vessel, its surface, and its painting;[1] and
4. self portraits in historical scenes to strongly imply his importance in society.

The Artist's Signature

Maya artists signed their work usually with two parts:

u-ts'ib = personal name or title

its'at = "his painting/writing-[personal name or title]-artist/sage"[2]

The artist might place his signature next to a ruler and near his throne to make an association between himself and royalty.[3]

Great Maya Artists

Maya artists were sometimes viewed as a direct embodiment of the power of creation—someone who had a certain supernatural quality.[4] Sometimes they were the sons of nobility who were apparently not in direct line to the throne.[5]

Lord *K'ak'-Til* of Naranjo's master artist— the Buenavista Vase (Holmul Style)

God N (*Pawahtuns*), a supernatural artist—he painted and carved masks

God D (*Itzamná*), a supernatural artist—he painted, carved, and invented writing

God B (*Chac*), a supernatural artist, the rain god—painter

Hun Batz or *Hun Chuen*, supernatural painter/scribe

Ah-Maxam, royal artist from Naranjo—*Vase of the Water Lilies*, *The Vase of the Seven Gods*, and *Vase of the Dancing Lords*.

"artist lord ***Popol Hol K'inich,"*** sculptor—stela 63 at Copán[6]

Tubal Ahaw, Master of the Pink Glyphs—he painted for the *Ik'* polity ruler known as "Fat Cacique." We know *Tubal Ahaw* was a royal painter because he placed his signature next to the ruler and behind the throne. His name also carries the *ahaw* royal title.[7]

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[1] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. pp. 92-95.
[2] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 47.
[3] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 50.
[4] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 49.
[5] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 55.
[6] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 70.
[7] Dorie Reents-Budet. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Durham: Duke University Press, 1994. p. 132.

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Name_____ Date_____

Stylized Animals in the Applied Clay Style

Compare the two vessels with jaguar heads on the lids represented by these drawings. Describe what they have in common with a jaguar in a natural environment, and give the similarities and differences in style between the two ceramic vessels.

A

B

RESOURCES 9

Artists as resources. Young Mexican girl working on a backstrap loom. © 1994 photograph courtesy San Diego Museum of Man, San Diego, California.

Maya Activities based on CD's and Multimedia Software

Students may have more interest in their learning options about the Maya if they are using encyclopedias developed as multimedia software. It has already been shown in research that students in classes where videodisc instruction is common place, show increased enthusiasm for science and higher scores on standardized tests.[1] Some of these opportunities for electronic processing are given here.

1. Take a field trip and take pictures at a museum. Have the best photos taken by your classmates processed on a photo compact disk (CD). Have CD's made for each computer in the classroom. Select an image from your personal or the class CD and copy it on a computer clip board. Select an image from a software encyclopedia and copy it on the clipboard too. Now transfer the two images to a computer word document. Give that document a name. Write a story comparing the two images. Remember, you can print out an encyclopedia software image only for your class assignment. It may not be reproduced for a publication because it is protected by copyright laws.

2. Look up *sculpture* in the encyclopedia software programs. Study the sections and images on casting. Read about the processes and describe the differences used by archaeologists and artists to cast reproduced monuments and small clay sculptures. As a project make a mold or a cast.

3. Find *sculpture* in the encyclopedia software programs and study the sections and images on carving. Read about the process and describe the differences used by artists to carve the Zoomorphic sculptures of Quiriguá, the monumental stelae and the reliefs of Palenque, Yaxchilán or Tikal. As a project find some stones and use them as tools. Demonstrate a skill at carving wood or stone (limestone or sandstone) with these tools and write about your experiences with stone against stone.

4. Investigate *sculpture* in the encyclopedia software programs and study the sections and images on *modeling*. Read about the process and describe the differences used by artists to model pieces like clay ball players or seated female figurines from Jaina Island. Select an image or two from an encyclopedia and copy them onto the computer clipboard. Now transfer the two images to a word document. Give that document a name. Write a story comparing the two images. Remember, you can print out an encyclopedia image only for your class assignment. It may not be reproduced for publication because it is protected by copyright laws. As a project, model in clay a hollow figure. Paint your clay figure.

5. Look up "Pre-Columbian Art and Architecture" in an encyclopedia, and study the paragraphs on natural dualities. Read about the dualities and describe the differences used by artists to to make light and dark, plain and ornate as a part of their sculptures and other art forms. Expand to other natural dualities as well when you write your comparison and contrast paper.

6. Find Quetzal, Parrot (Yellow-headed) and Toucan (*cuviers*) in a software encyclopedia in the section on Birds. Listen to the birds' songs. Make a graph to describe the plumage and color

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[1] Heidi Marie Rock and Alysa Cummings. "Can Videodiscs Improve Student Outcomes?" *Educational Leadership*. Vol. 51. Number 7, April 1994. pp.46-50.

location on each bird. Pretend you are an ancient Maya headdress-maker advertising your stock of feathers. Make a chart or advertisement showing the colors and probable lengths of feathers for the plumage you use in your headresses from these birds.

7. If you are interested in writing music, listen carefully to the bird songs in the encyclopedia programs. Each bird has its own pattern variation and quality of notes. Here are some words to help you out:[2]

Kind	Time	Pitch	Loudness	Quality
buzz	broken	ascending	faint	bell-like
carol	continuous	descending	loud	brilliant
chirp	hurried	high	moderate	energetic
medley	long	low	weak	metalic
peep	rapid	moderate		nasal
scream	short	varied		piping
trill	slow			ringing
twitter				shrill
warble				soft

Write a piece of music that would represent the kind of music the Maya would write based on the common characteristics of the song of birds.

8. Read about members of the cat family found under animal life in Central America in an encyclopedia. List the animals[3] and learn about their characteristics. Study images of animals from the cat family in a museum or zoo. Draw pictures of them as they appear in museums.

9. Picture yourself in a Maya costume or create a *morph* image by juxtaposing your own image with an encyclopedia image of a Maya sculpture or an image of a zoomorphic figure. This can be done with cut/paste using digitized or scanned images. If you have a morph program this will help you visualize the finished images.

10. Produce and print out a map for Mesoamerica. Locate and identify the artistic sites of Quiriguá, Yaxchilán, Copán, Uxmal, Tikal, and Palenque.

Electronic Searches on the Maya

Here are some of the terms that you can look up in an encyclopedia to help you study about the Maya:

Jaguar
Jade Carving
Decorative Arts
  Pottery
  dyeing
Maps
Sculpture
  modeling
  casting
  carving
hieroglyphs
Birds
  quetzal
  parrot
  toucan
American Indians
Calendar and Religion

[2] San Jose State College Information Sheet. "Suggestions on Learning to Know Birds."
[3] jaguar, ocelot, jaguarundi, and margay.

Books in English for Students on the Maya and related topics[1]

Grades 2 and younger

Griego, Margo C. *Tortillitas Para Mama.* New York: Henry Holt & Co. 1981. (Bilingual)
Nursery thymes and beautifully illustrated pages in color including rhymes and scenes of a *molinillo*.

Kouzel, Daisy. *The Cuckoo's Reward/El premio del cuco.* Doubleday. 1977. 32 pp.
This attractive adaptation of a Mayan legend tells why the gray cuckoo lost its feathers and has to borrow the nests of other birds to lay its eggs.

McKissack, Patricia. *The Maya.* Children's Press. 1985. 48pp. $8. (Gr. 2-4)
Easy to read text and excellent graphics reveal this pre-Columbian civilization to young readers.

Grades 3-6

Blackmore, Vivien. *Why Corn is Golden: Stories about Plants.* Little, Brown. 48 pp. $12.95. ISBN: 0-316-54820-0
This intriguing collection of six pre-Columbian legends and riddles about plants, flowers, and fruit is strikingly illustrated.

Daquedano, Elizabeth. *Aztec, Inca, and Maya.* New York: Random House. Alfred Knopf, distributor. 1993. ISBN 067-983-883x. $16.
Another incredible book from the Eyewitness series with lots of great illustrations, photos, and information.

de Gerez, Toni, and William Stark. *Song is a Piece of Jade: Poems of Ancient Mexico in English and Spanish.* Little, Brown. About 48 pp.

Greene, Jacqueline Dembar. *The Maya.* New York: Franklin Watts. 1992. 63pp.
Beautifully illustrated in color with art objects and sites. Includes life in Maya lands and the end of Maya Cities. Glossary and Index.

Markum, Patricia. The Little Painter of Sabana Grande. New York: Bradbury Press. 1993. 30 pp. $15.
Story about a Central American adolescent boy who learns how to make his own paints. A beautifully illustrated fictional story.

National Geographic Education Staff, *The Amazing Maya Activity Kit.* National Geographic Society, 1992. ISBN 0-7922-2374-8.
Get your scissors ready for this activity kit. There are puzzles, masks, and even a roll-out of a cylindrical vase to cut out. The activities and folktales are geared for the younger child, but the images and bright colors are for everyone! Packed in a folder for easy storage.

Neurath, Marie. *They Lived Like This: The Ancient Maya.* Watts. 1966. 32pp.
Authentic drawings based on Maya wall paintings and designs. Many aspects of the Maya civilization including the arts and history-social science.

Perry, Richard and Rosalind. *Maya Missions.* Santa Barbara: Espadaña Press, 1988.
This book is not at the reading level of youngsters in grades 3-6, but since California students especially are studying California missions within these grades, they may be excited to see the maps and locations of the Spanish Colonial Churches of Yucatan. Copies available through Los Angeles County Museum of Art book store.

Shelterly, Susan Hand. The Dwarf-Wizard of Uxmal. New York: Macmillan Publishing Co. 1990. 30p. ISBN: 0-689-31455-8. Gr. 2-4.
A legend retold in a fast moving, exciting narrative. But thumbs down on the illustrations.

Wisniewski, David. *Rain Player.* New York: Clarion, 1991. 32 pp. Gr. 2-5.
ISBN 0-395-55112-9
In this dramatic, original tale set in the ancient Maya civilization, a young ball player challenges the rain god to a game of *pok-a-tok* to end a terrible drought.

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[1] Many of the entries on this special list are made possible through the scholarship of Isabel Shon, Drector of the Center for the Study of Books in Spanish for Children and Adolescents, California State University, San Marcos, California. Isabel Shon. *Books in Spanish for Children and Young Adults: Series VI.* Metuchen, N.J.:Scarecrow Press. 1993 and other publications. Please refer to the INTERNET information in this book to contact this Center.

Grades 7-9

Aliki. *Corn is Maize: The Gift of the Indians*. New York: Harper, 1976. Bleeker, Sonia. *The Maya Indians of Central America*. New York: William Morrow, 1961. 106 pp. (Gr. 5-8)

The story begins with the Maya 5000 years ago and ends with today. Ceremonial centers and festivals. A clear presentation of gods is given.

Castañeda, Omar S. *Among the Volcanoes*. New York: Lodestar Books. 1991. 183 pp.

The fictional tale of Isabel Pacay, a Maya teenager trying to pursue a dream and to search for her identity.

Haynes, Tricia. *Guatemala*. New York: Chelsea House. 1987. 95 pp.

The ruins of Tikal and other sites are included in the ilustrations of this book, which is mostly about modern life in Guatemala.

Jenness, Aylette and Lisa W. Kroeber. *A Life of Their Own*. New York: Thomas Y. Crowell Co. 1975. 133 pp. Gr. 7-9

About an Indian family in Guatemala. Complete black-and-white photos of family life, art activities, and customs.

Lattimore, Deborah Nourse. *Why There is No Arguing in Heaven: A Mayan Myth*. New York: Harper and Row. 1989. 32 pp. ISBN 0-06-023717-1. Gr. 4-7.

Stunning watercolor illustrations of ruins and sculptures. Use as a background to the study of Maya religion.

Price, Christine. *Heirs of the Ancient Maya: A portrait of the Lacandon Indians*. New York: Scribners. 1972. 64 pp. (Gr. 6-9).

A sense of dignity and pride for the Indians is revealed with beautiful photos, including photos of ruins.

Rhoads, Dorothy. *The Corn Grows Ripe*. New York: Viking. 1956. 88 pp.

A 12 year old Maya Indian boy takes on his father's responsibility for growing corn. The story is about a boy's maturation and the importance of corn in the lives of Maya Indians. The Hetz Mek celebration is included.

Sullivan, Charles, Editor. *Here is My Kingdom*. New York: Harry N. Abrams. 1994. 119 pp. $25. ISBN 0-8109-3422-1.

This is an anthology of Hispanic-American literature for young people. Includes one Maya tablet and a beautiful poem about it.

Trout, Lawana Hooper. *The Maya*. New York: Chelsea House Publishers. 1991. 120 pp. Gr. 7-9

Dramatic color presentation of figurines from Jaina and Pacal's lid. Other nice representations and photos in black and white. Covers the origins and survival to the modern Maya.

Adult:

Coe, Michael D. *Breaking the Maya Code*. New York: Thames and Hudson, Inc. 1992. 300 pp.

One of the great Maya scholars writes about the Maya glyphs. An exciting chapter called "Pacal's People" is a must for teachers. It tells how modern scholars discovered the meaning oehind the glyphs and stones of Palenque.

Von Hagen, Victor W. *Maya Explorer*. San Francisco: Chronicle Books. 1990. 324 pp.

A book about John Lloyd Stephens, the discover of the Maya. Frederick Catherwood's illustrations throughout.

Books in Spanish on the Maya and related topics

Grades 2 and younger

Coleccion piñata. *Leyendas Mayas* (Maya Legends). Mexico: PAT. 1985. 28 pp. col. ill. ISBN: 968-39-0080-1

Griego, Margo C. *Tortillitas Para Mama*. New York: Henry Holt & Co. 1981. (Bilingual)

Nursery thymes and beautifully illustrated pages in color including rhymes and scenes of a *molinillo*.

Kouzel, Daisy. *El premio del cuco*. *(The Cuckoo's Reward)* Doubleday. 1977. 32 pp. (Bilingual)

This attractive adaptation of a Mayan legend tells why the gray cuckoo lost its feathers and has to borrow the nests of other birds to lay its eggs.

Grades 3-6

Bohorquez, Rossana. *LA DANZA DE YAXUM* (*Yaxum's Dance*).
968-24-2997-8. $4.55.
The beautiful tale of Yaxum, a young Maya who loved the sun so dearly that he wished to offer a dance in appreciation of its existence. He asked advice of an old dancer and of different animals on how to learn to dance. He observed nature and imitated its movements with patience and discipline, until one day he was ready to offer the loveliest and grandest dance possible to the sun.

ELMEKIN Y LA SERPIENTE (*Elmekin and the Serpent*).
968-24-2335-X. $4.55.
A fantasy story in which a Maya youth is guided by a serpent to see the world around them. The serpent encourages the youth to really see and appreciate the grandeur all around him. Later when the youth is creating his own pottery designs the true significance of the serpent's message comes to him.

Pilar, Tulor. *Chichén Itzá, la ciudad sagrada: los Mayas*. Madrid: CESMA, SA-Aguacate, 25-28044. ISBN: 84-348-2783-2. 1990. 73 pp.
Colorful illustrations, black-and-white photos, and photos in color add to the appeal of this book.

Urrutia, Christina, and Marcial Camilo. *El Maíz (Corn)* Mexico: Editorial Patria, 1981. 44 pp. ISBN 96-839-0004-6. Gr. 3-5.
Life in rural Mexico is beautifully described with stunning watercolor illustrations. Celebration of the corn harvest and activities related to the eating and growing of corn in Mexico.

Grades 7-9

Acosta, Virgina Garciá. *LOS SEÑORES DE MAIZ: TECNOLOGIA ALIMENTARIA EN MESOAMERICA* (*The Masters of Corn: Food Technology in Middle America*)
968-6177-33-7. $7.95.

Garcia, Horacio and Norma Herrero. *LOS SEÑORES DEL TIEMPO: SISTEMEAS CALENDARICOS EN MESOAMERICA* (*The Masters of Time Systems in Middle America*)
968-6177-334-5. $7.95.

Mota, Ignacio H. de la. *El libro del chocolate. (The Book of Chocolate)*. Madrid: Ediciones Pirámide, 1992. 429 pp. ISBN: 84-368-0647-6. Gr. 9-Adult.
All about chocolate from pre-Columbian times. It's all about plantations, chocolate in literature, and the social role of chocolate, as well as recipes.

Ortiz, Gilberto Rendón. *POK A TOK: EL JUEGO DE PELOTA* (*Pok a Tok: The Ballgame*).
1987 (2nd. Ed.). 60 pp. Black-and-white illustrations. L. 968-7205-03-2. $5.95.
Winner of the Mexican National Prize for Children's Literature in 1982. The author calls plants and animals by their ancient names and gives them life in this collection of fables about Mexico's indigenous past.

EL TESORO DEL VOLCAN DE LA MEDIA LUNA (*The Half-Moon Volcano Treasure*).
1989. 176 pp. Black-and-white illustrations. 968-7205-24-5. $10.55.
The search for an archaeological treasure and the necessity to save the Mexican cultural heritage is the subject of this cleverly written adventure.

Salmoral, Manuel Lucena. *La América Precolombia*. Madrid: Grupo Anaya, S.A. 1989. 88 pp.
ISBN: 84-207-3420-9.
Small paperback with sepia-like illustrations discusses the Maya society and other pre-Columbian cultures.

Vasquez, German. *ENBUSCA DEL MAR DEL SUR* (*In Search of the Southern Sea*)
84-348-3386-7 About $11.95. About 74 pp.
The history of the conquest of Mesoamerica, which lasted almost 200 years and ended with the surrender of Tayasal, the last independent Maya City.

Volkmer, Jane Anne. *Song of Chirimia-LA MUSICA DE CHIRIMIA*. 0-87614-423-7. $12.95.
The lyrical retelling of a beautiful Guatemalan folktale, the legend of chirimia, whose music is sweeter even than that of the birds. A young man's love for a Maya princess sends him on a quest for the purest song in the woods. Vibrant illustrations based on ancient stone carvings of the Maya civilization.

Instructional Materials for Teachers

Tape Recording: Specify either English or Spanish, a tape of a tour of the Art Exhibit called *The Ancient Americas: Art from Sacred Landscapes*. Currently on sale at Los Angeles County Museum of Art Book Store for $8.00.

Course Model for History-Social Science, Grade 7. Sacramento: California State Department of Education, 1994. # 1132. $12.75. California residents must add sales tax. School P.O.'s and credit cards accepted. Allow two weeks for shipment. Write Bureau of Publication Sales, California State Department of Education, P.O. Box 271, Sacramento, California 94244-2720. Call 916-445-1260.

For teachers who want a day-by-day lesson plan, this document is available through the State Department. Five days of History-Social Science study are allocated to the Maya.

Reproductions

The University Prints, 21 East Street, Box 485, Winchester, MA 01890. Call (617)-729-8000. These black-and-white prints (5 1/2 x 8") are seven cents each.

Select one or two and order enough for each student. Three prints per student would be under $10.00, including shipping and handling.

N 277 Art Map of Mesoamerica

TIKAL

N322 Temple I, Tikal and portion of central acropolis
N323 Carved wooden lintel from Tikal
N 324 Stela 26 side and Stela 22 Tikal

COPAN

N325 Reconstruction of Main Plaza and view of stairway and ballcourt
N326 Seated Dignitary and glyph blocks, Copán stairway
N 327 Stela B with dignitary, Copán
N 328 Busts of Young Maize God

QUIRIGUA

N 329 Stela D and Zoomorph P
N 331 Eccentric Flint

PALENQUE

N 335 Palace and Square Tower from the Southwest
N 336 Temples of the Cross Group
N 337 Temple of the Inscriptions and Crypt
N 338 Jade Mask and stucco head with plumes
N 339 Stucco Relief from Palace Pier and limestone relief
N 340 Modeled face and incense burner stand

YAXCHILAN

N 344 Lintels 25 and 53

BONAMPAK

N 345 Wall painting and robing and procession
N 346 Wall painting (detail)

Vase Painting

N347 Dancer holding serpent (Primary Standard Sequence Glyphs)
N348 Vases with warrior priest and dignitary on litter

Carving

N 349 Jade Plaque and Stone disk with Ball player
N 358 Carved pottery and incised onyx bowls

Modeled Sculpture

N 356 Four pottery figurines from Jaina
N 357 Whistle figurine from Jaina

Book

N 376 Codex Dresden Pages

Architecture

N 350 Reconstructed palaces in Rio Bec style and Chenes style.
N 351 Architecture and palaces: Labná, Kabah, and Sayil.
N 352 Uxmal
N 353 Uxmal, facade with stone mosaic
N 354 Uxmal, Palace of the Governor
N 355 Chichén Itzá, Nunnery
N 370 Chichén Itzá, Temple of the Warriors.
N 372 Chichén Itzá, Temple of the Jaguars
N 373 Chichén Itzá, Caracol (Observatory)

Other

N333 Kneeling wood figure with folded arms.
N330 Carved and painted vases from Ulua Valley

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For catalogs or reference: (800) 826-0132 or (814) 863-3104

Only audio-visuals suitable for secondary students are described here.

VHS 34721PS ***Chichicastenango*** 30 min. color s-c-a $19.50 rent

Recorded during a two-year period in the Guatemalan town of Chichicastenango, this program features Quiche Indians observing a mid-December religious ceremony honoring Santo Tomás, the town's patron saint. The ceremony was recorded inside the more than 400-year-old church of Santo Tomás, at the Indian Auxiliary Office, and at the ancient stone idol of Pascual Abaj, or Turkaj. The ritual reflects the syncretistic mix of Maya and folk-Catholic elements prevalent in Guatemala. Produced by Claudia Feldmar for Camera 2. Call Penn State.

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Comalapa is one of Guatemala's purest Indian villages, a town of ancient rites and customs that has remained relatively unchanged over the centuries. This program covers a number of topics: a Cackcique Indian courtship and a wedding ceremony, local painters and weavers, and cofradias. Cites the gradual disappearance of cofradias, ritual brotherhoods organized in honor of a saint that are considered an indispensable part of manhood and the only legitimate route to community status. Produced by Claudia Feldmar. Camara 2. Call Penn State.

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Selected Bibliography

Ashmore, Wendy
1991. "Site Planning Principles and Concepts of Directionality Among the Ancient Maya". *Latin American Antiquity*, Vol. 2, No. 3

Armento, Beverly J., et.al.
1991. *Across the Centuries*, Boston: Houghton Mifflin

Bardawil, Lawrence W.
"The Principal Bird Deity in Maya Art—An Iconographic Study of Form and Meaning." *Art & Iconography*

Benson, Elizabeth and Gillett G. Griffin, editors.
1988. *Maya Iconography*. Princeton University Press, Princeton, New Jersey

Coe, William R.
1975. "The Maya: Resurrecting the Grandeur of Tikal" *National Geographic*, Vol. 48, No. 6

Coe, Michael D
1971. *The Maya*. Praeger Publishers, Washington.

Devel, Leo
1967. *Conquistadors Without Swords: Archaeologists in the Americas*. St. Martin's Press, Inc., New York

Disselhoff, Hans-Dietrich and Sigvald Linne
1966. *The Art of Ancient America*. Greystone Press/New York

Efland, Arthur
1992. *Planning a Balanced Comprehensive Art Curriculum*. Columbus, Ohio. State of Ohio Department of Education

Fifth Palenque Round Table, Vol. VII,
1983

Fourth Palenque Round Table, Vol. VI
1980

Friedl, David, Linda Schele, and Joy Parker
1993. *Maya Cosmos*. William Morrow and Company, Inc. New York

Feuerstein, Reuven and Yaacov Rand and John E. Rynders
1988. *Don't Accept Me as I Am*. New York: Plenum Press

Gann, Thomas
1926. Ancient Cities and Modern Tribes. Charles Scribner's Sons. New York

Griffin, Gillett G.
"Portraiture in Palenque" *Art & Iconography*

Ingle, Majorie
1984. *The Mayan Revival Style*,Albuquerque: University of New Mexico Press

Kerr, Justin
1990. *Maya Vase Book*, Vol. 2. Kerr Associates, 14 West 17th St. New York, N.Y. 10011

1989. *Maya Vase Book*, Vol. 1. Kerr Associates, 14 West 17th St. New York, N.Y. 10011

Kubler, George
1990. *The Art and Architcture of Ancient America*. Pelican Books, London .La Fay, Howard
1975. "The Maya: Children of Time" *National Geographic*, Vol. 148, No. 6

Labbe, Armand J.
1982. *Religion, Art, and Iconography: Man and Cosmos in Prehispanic Mesoamerica*. Bowers Museum Foundation. Santa Ana, California

Lowderbaugh, Thomas E.
1993. *Collecting Their Thoughts: Using Museums as Resources for Student Writing*. Washington, D.C.: Smithsonian

Mallan, Chicki
1987. *Guide to the Yucatan Peninsula*. Moon Publications, Chico California

Miller, Mary Ellen
1986. *The Murals of Bonampak*. Princeton University Press, New Jersey
Morley, Sylvanus G.
1935.*Guide Book to the Ruins of Quiriguá*. Washington: Carnegie Institute of Washington
Morris, Jr. Walter F.
1983. "Fall Fashions: Lagartero Figurine Costume at the End of the Classic Period." *Fifth Palenque Round Table*, Vol. VII
Norton, Natascha and Mark Whatmore.
1993. *Central America*. London: Cadogan Books
Price, Christine
1972. *Heirs of the Ancient Maya: A portrait of the Lacandon Indians*. Charles Scribner's Sons, New York
Reents-Budet, Dorie
1994. *Painting the Maya Universe: Royal Ceramics of the Classic Period*. Duke University Press, Durham, North Carolina
Robertson, Merle Greene.
1980. *Third Palenque Round Table*, Vol. VI, , Part 2. Austin: University of Texas Press
1980. *Tercera Mesa Redonda de Palenquee*, Vol. IV, Herald Printers, Monterey, California
1976. *The Art, Iconography & Dynastic History of Palenque*, Part III. Robert Louis Stevenson School, Pebble Beach, California
1973. *Primera Mesa Redonda de Palenquee*, Part I, 1973, Robert Louis Stevenson School, Pebble Beach, California
Scarborough, Vernon L. and David R. Wilcox, editors
1991. *The Mesoamerican Ball Game*. Tucson: The University of Arizona Press
Schele, Linda and Mary Ellen Miller
1986. *The Blood of Kings*. George Braziller, Inc. New York and Kimbell Art Museum Fort Worth
Sperlich, Norbert and Elizabeth Katz Sperlich
1980. *Guatemalan Backstrap Weaving*. University of Oaklahoma, Norman, Oklahoma
Stone, Andrea
"Variety and Transformation in the Cosmic Monster Theme at Quiriguá, Guatemala" *Fourth Palenque*
Stuart, George E.
1975. "The Maya: Riddle of the Glyphs" *National Geographic*, Vol. 148, No. 6
Tate, Carolyn E.
Yaxchilán: The Design of a Maya Ceremonial City. Austin: University of Texas Press
Tompkins, Peter
1976. *Mysteries of the Mexican Pyramids*. New York: Harper & Row Publishers
Townsend, Richard F.
1992. *Ancient Americas: Arts from Sacred Landscapes*. Chicago: Art Institute of Chicago

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Answers

Page 22—The Maya and their Environmental Resources

Art Form	Sources of Materials	Sources of Imagery	Other
Glyphs	**limestone, sandstone, mineral paints**	**snakes, jaguars, bats, birds, humans, spider monkeys**	**supernatural, cosmic, creativity**
Sculpture	**limestone, wood, clay, stucco, sandstone**	**snakes, jaguars, bats, birds, humans, spider monkeys**	**supernatural, cosmic, suggestion**
Ritual Objects	**pyrite, obsidian, clay, limestone, jadeite, shell**	**snakes, jaguars, bats, birds, humans, spider monkeys**	**supernatural, cosmic, ceremonies, accession, genealogy**
Ceramics	**clay, mineral pigments, shells (to hold paint)**	**frogs, waterlillies, snakes, jaguars, bats, birds, humans, spider monkeys**	**supernatural, cosmic, imagination**
Costumes	**cotton, plants for dyes, jaguar pelts, feathers, jadeite, shell**	**snakes, jaguars, stars, sun, moon, birds,**	**supernatural, cosmic, wealth**

Page 41—The early days of Zero
1) Answers may vary. The number may have been chosen because people have 20 fingers and toes. 2) They were able to accurately measure solar and lunar cycles (upon which calendars are based). 3) Answers may vary. Possibulities include spring and autumn equinoxes, motions of planets, etc. 4) Possibilities include the solar cycle (1 year), the seven-day cycle (1 week), etc.

Page 42—Los origenes del cero
1) Las respuestas varian. Quizás el número fue escogido porque la gente tiene veinte dedos en las manos y los pies. 2) Ellos pudieron calcular con precision los ciclos del sol y de la luna (en los cuales se basan los calendarios). 3) Las respuestas varian. Las posibilidades incluyen los equinoccios de primavera y otoño, los movimientos de los planetas, etcetera. 4) Las posibilidades incluyen el ciclo solar (un año), el ciclo de siete días (una semana), etcetera.

Page 43—Maya Bar-and-Dot Number Identification
1) 8; 2) 10; 3) 3; 4)13; 5) 9; 6) 8; 7) 5; 8) 18; 9) 13; 10) 9; 11) 18; 12) 7; 13) 13; 14) 13; 15) 3; 16) 4; 17) 8; 18) 10; 19) 9; 20) 14.

Page 44—Maya Time Cycles
1) 6; 2) 12; 3) Find the least common multiple of *m* and *n*; 4) 18,980; 5) 52.

Page 85—Maya Thrones • Tronos Mayas
Answers may vary. 1) A. ornamentation; B. ornamentation, height. 2) A. ornamentation (some students may consider it similar because the subject matter is the same: animals), height; B. ornamentation, height. 3. A. ornamentation, height, width; B. ornamentation, height; 4. A. all; B. ornamentation, height, width. 5. A. ornamentation, height; B. direction, ornamentation.

Hay muchas respuestas posibles. 1) A. decoración; B. decoración, altura. 2) A. decoración (algunos estudiantes podrán considerarla similar porque el tema es igual: animales), altura; B. decoración, altura. 3. A. decoración, altura, ancho; B. decoración, altura. 4. A. todos; B. decoración, altura, ancho. 5. A. decoración, altura; B. dirección, decoración.

Page 111—Cylindrical Vase with Ball player theme.
Five. Spectators. They do not wear any protective gear. They are on different ground lines or elevations than the players. The many glyphs and speech scrolls suggest the players and observers may be speaking. The short texts of hieroglyphs are connected to each "speaker" with snake-like speech scrolls.

Page 137-138— Directions at Quirigua
1) front; 2) Stela 5; 3) right; 4) left; 5) unnamed structure 6; 6) back; 7) Zoomorph 2; 8) Stelae 3 and 4; 9) left.

Page 139—Ubicacion en Quiriguá
1) enfrente; 2) estela 5; 3) a la derecha; 4) a la izquierda; 5) estructura sin nombre 6; 6) atrás; 7) zoomorfo "2"; 8) estelas 3 y 4; 9) a la izquierda.

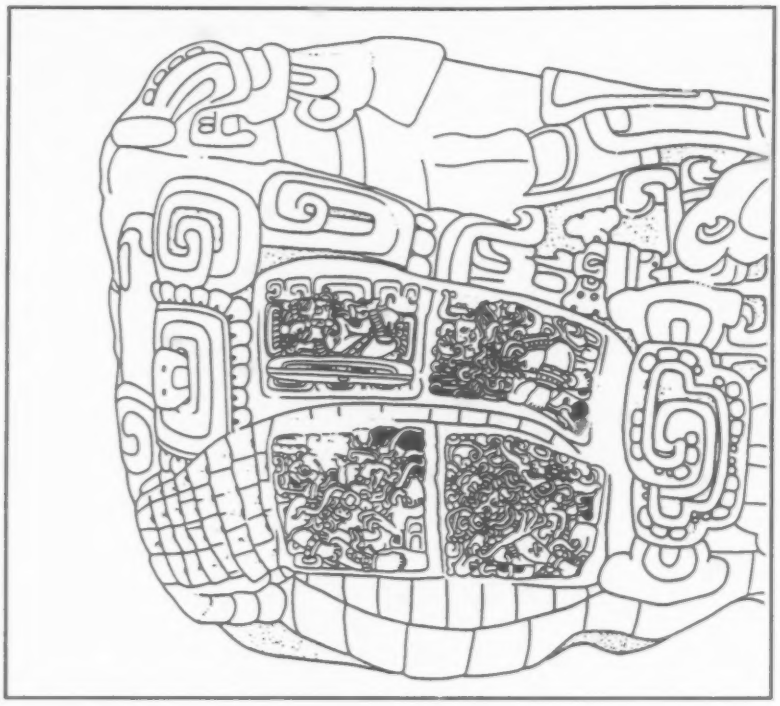
Page 141—Where are the Monuments at Quiriguá?
1) back; 2) left; 3) left; 4) front; 5) front; 6) back; 7) right; 8) right.

Page 142—¿Donde estan los monumentos en Quiriguá?
1)atrás; 2) a la izquierda; 3) a la izquierda; 4) enfrente; 5) enfrente; 6) atrás; 7) a la derecha; 8) derecha.

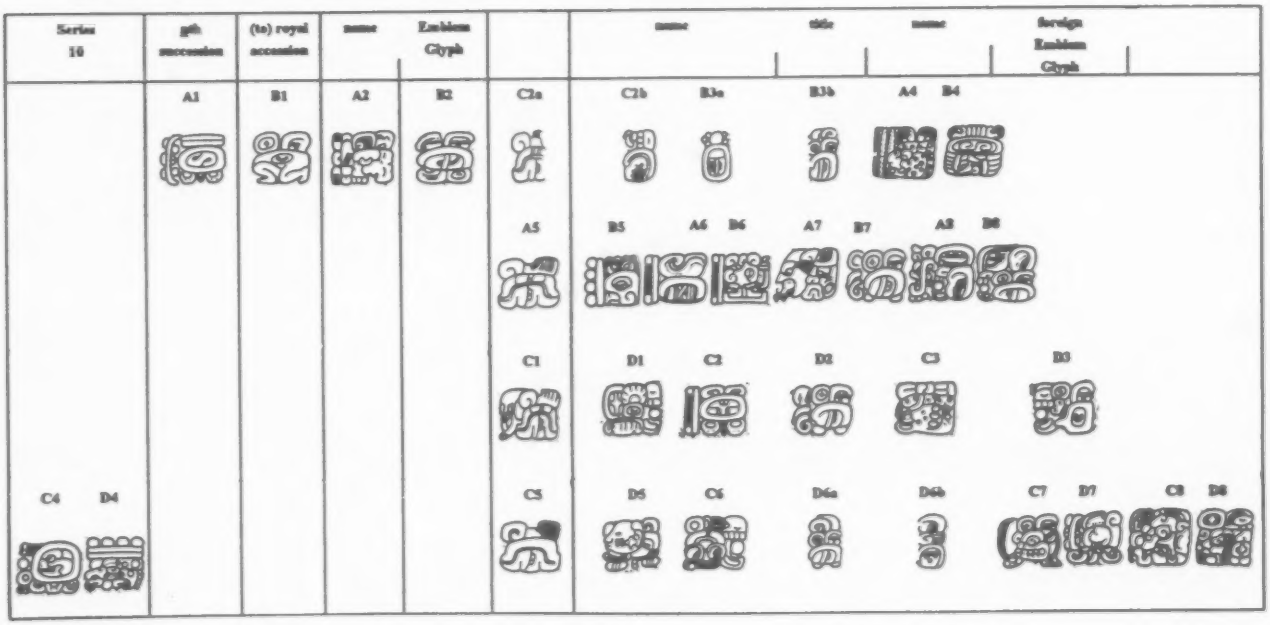
Page 143—Identify the Monuments at Quirigua
1) Stela 5; 2) Zoomorph 2; 3) Zoomorph 2; 4) unnamed structure 6; 5) Stelae 3 & 4; 6) Stela 5; 7) Stelae 3 & 4; 8) unnamed structure 6.

Page 144—Identifique los monumentos en Quiriguá
1) estela 5; 2) zoomorfo "2"; 3) zoomorfo "2"; 4) estructura sin nombre; 5) estelas 3 y 4; 6) estela 5; 7) estelas 3 y 4; 8) estructura sin nombre 6.

Page 163-165—Communications about Maya Communications, Part I.



Page 181-182—Parallel Glyph Passages • Episodios de glifos semejantes



Page 203—Cacao Glyph Search
Glyph number three is the correct answer. The glyph description should include details about shapes and line directions as well as the possible reference to eye, mouth, and fish-like object seen in profile. Glyph 3 has a circle with a dot in it like glyph "A." It has two extensions on the right like Glyph "B." It has an indent on the left like glyphs "A" and "B."

Page 208—Primary Standard Sequence
1) glyphs one and two; 2) none; 3) glyph 3; 4) glyphs 4, 5, 6, and 7; 5) all remaining glyphs.

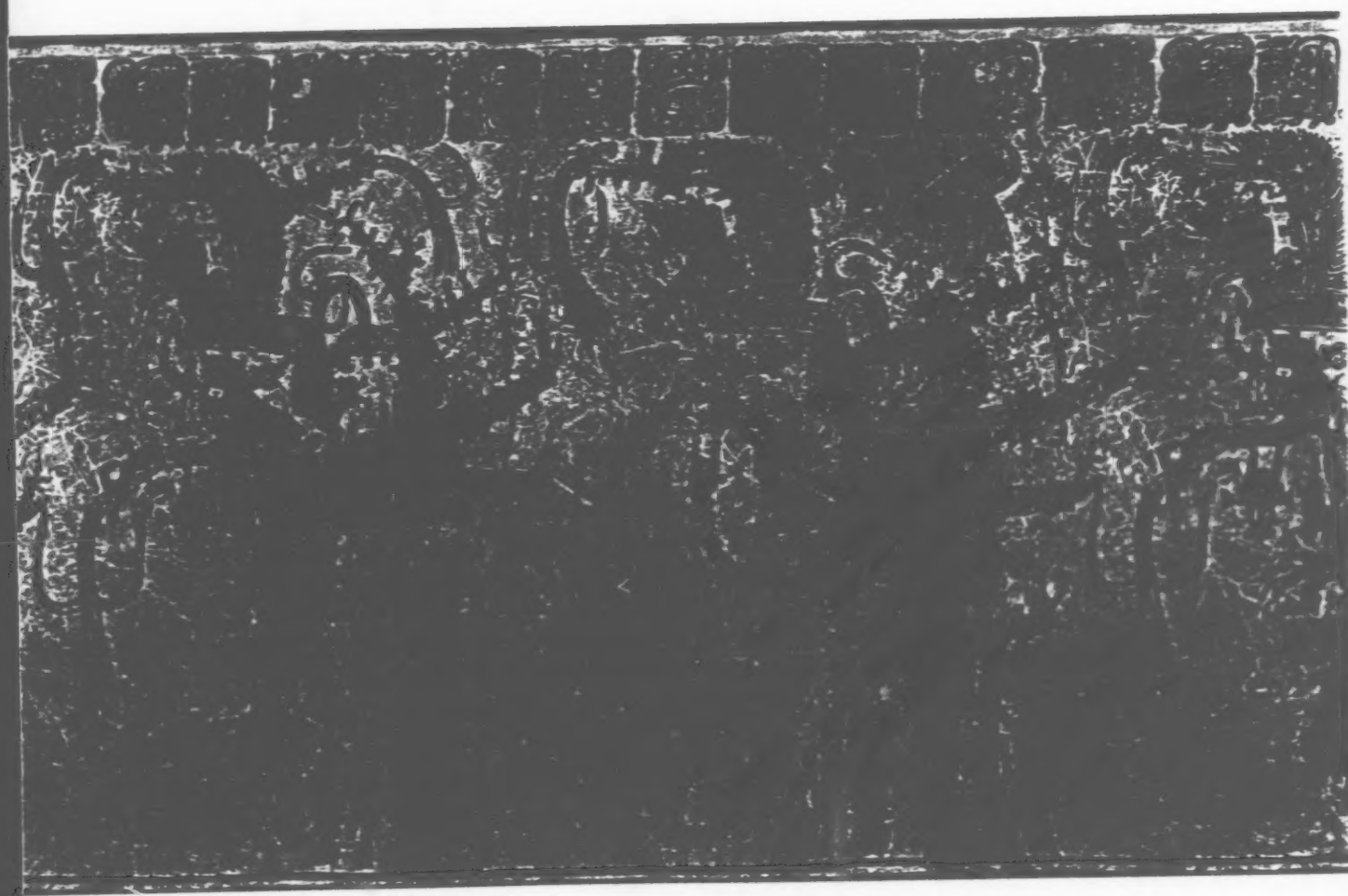
Page 234—Symmetry in Maya Art
Answers will vary. There are no examples of horizontal symmetry. The only examples of vertical symmetry are "D," "F," "G," and "H."

Page 244—Stylized Animals in the Applied Clay Style
Answers will vary. The things the pottery vessels have in common with a jaguar in his natural environment are the head shapes which are three-dimensional (3-D), complete with details like an open mouth. Vessel B also has paws and claws that are 3-D. Vessel A has a jaguar on the lid that reclines as in nature. The vessels are similar with jaguar heads that have open mouths. They have more differences, however, than similarities. Vessel B is the only one with a tongue showing. Vessel B is of an alert young baby jaguar, sitting up, and begging for food or attention. The whole vessel is a jaguar shape, both container and lid. Vessel A's jaguar is confined to the lid of the container. It appears to be an adult animal because of its proportions. Because Vessel B jaguar is larger than Vessel A jaguar, the artist has been able to provide more details.

Offsite INTERNET Access[1]

Offsite INTERNET access to CSBS collection via Innopac online catalog at CSU San Marcos requires: 1) INTERNET access; 2) VT-100 terminal emulation; 3) Telnet to IP address:144.37.1.4. 4) At the login prompt, type: **library**. The password must be in lowercase letters. If the system says "all ports in use," try later. 5) Once connected to the CSUSM Innopac, you will see on your screen a series of letters such as A> AUTHOR which will help you mke your search when you touch the keys on your keyboard. For example, to search by subject, press 'S' on your keyboard and type in Maya or other subject. After typing in your subject and getting a list of subjects, you can press 'F' to find materials that are your subject and are located in CSBS. After limiting your search, you will get a list of items that are both in the subject area you typed in and in the location you chose. When finished searching, press escape until back to main menu. Then press 'D' to disconnect.

[1] See footnote on page 248, library address on page 9 and lists on pages 248-250.



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